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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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FIFTY-SECOND YEAR

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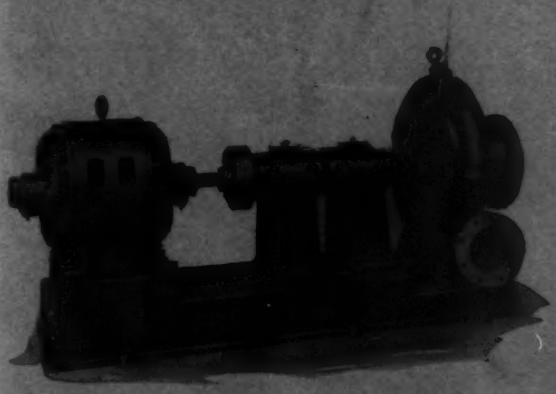

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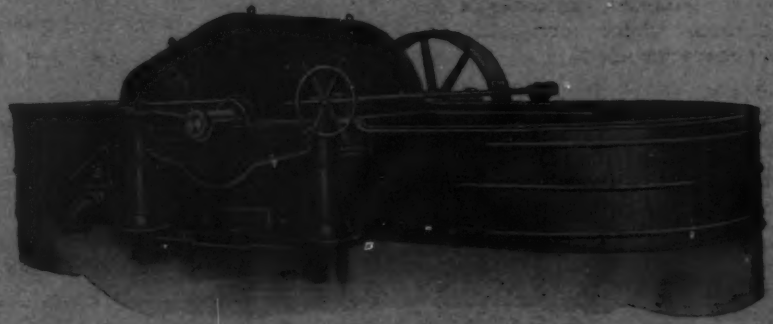

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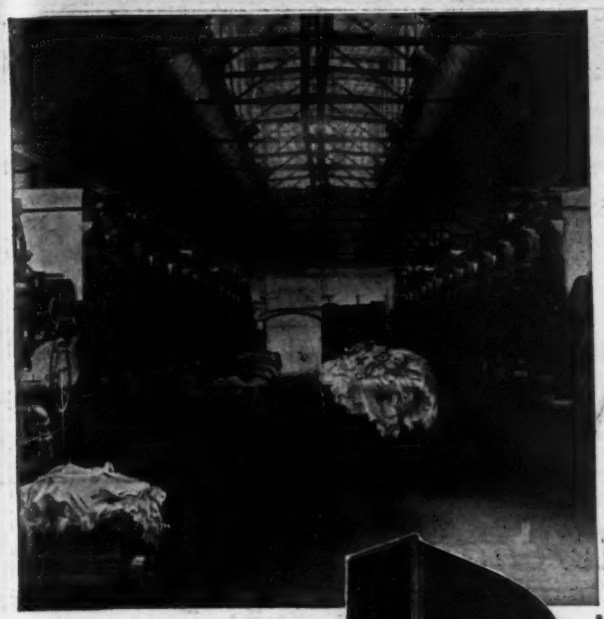

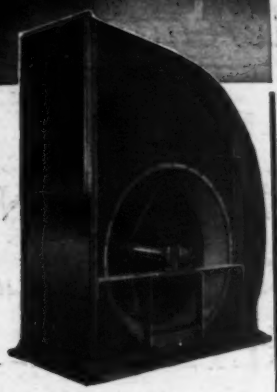

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SECOND YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R PALMER, PRESIDENT — GEO. S. MACDONALD, VICE-PRESIDENT & TREAS. — F. K. HOPPIE, SECRETARY

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PAPER TRADE JOURNAL

Vol. LXXVII. No. 24 NEW YORK AND CHICAGO Thursday, December 13, 1923

MAKE REPORT ON PAPER SPECIFICATIONS

Special Committee Files Results of Its Labors with Joint Congressional Committee on Printing—Numerous Important Changes Made in Specifications—New Limit Placed on Quantity Contractor May Be Required to Supply—Public Printer to Relieve Contractors of Burden of Hauling—Several New Classes of Paper Added—Approximate Estimate of Quantities.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 12, 1923.—The Committee on Paper Specifications has made its fifteenth report to the Joint Congressional Committee on Printing in connection with the new paper specifications for the Government Printing Office for the fiscal year beginning March 1. The report, which is signed by F. P. Veitch, of the Paper Laboratory, Bureau of Chemistry, who is chairman, is as follows:

In accordance with the resolution of the Joint Committee on Printing of February 5, 1923, the Committee on Paper Specifications assembled on October 4 and thereafter and considered the proposal and specifications for furnishing paper for the public printing and binding for the term of six months or one year, beginning March 1, 1924, and submits herewith its recommendations for proposal and specifications for such paper.

After the proposal and specifications had been prepared they were considered at a conference with paper makers and dealers, held in the room of the Joint Committee on Printing on November 13, 1923. The criticisms and suggestions offered by the paper makers and dealers have been carefully considered by the Committee on Paper Specifications and the proposal and specifications modified accordingly in as far as seemed proper and practical.

A number of changes and additions have been made both in the proposal and in the specifications. Some of these changes are of sufficient importance to note specifically in this report; others are minor in character and need no individual mention. All, however, have been made with the object of clarifying and simplifying the specifications and to furnish maximum information to the bidders as to the requirements of the Government Printing Office for paper.

Limitation of Quantity

In the proposal, paragraph 12 has been modified to limit the quantity which the contractor may be required to supply on any one specification to 25 per cent in excess of the total estimated quantity contracted for by him thereunder.

Paragraph 13 has been modified in order to give definite information concerning the methods of sampling and testing and the instruments and conditions employed by the Testing Section of the Government Printing Office. Some statements on these subjects seem desirable, in order to acquaint bidders and contractors with the care and fairness of the sampling and testing of deliveries.

It has been found necessary to add a new paragraph (No. 18) defining the term "Well Animal-glue Sized," as used in these specifications.

Paragraph 24, with reference to the permitted variation in the ream weight of paper, has been clarified and made more definite.

Paragraph 34, which heretofore required delivery of paper within the Government Printing Office Warehouse in the City of Washington, has been changed to require delivery f. o. b. Washington, D. C., since the Public Printer is convinced that the Government Printing Office can haul the paper more satisfactorily and economically than the contractor.

The Important Changes

In the schedule itself the most important changes are as follows:

Change of title for the several classes of papers to bring them in closer agreement with those now commercially employed.

In the specifications proper, the item "Strength" has been changed to read "Bursting Strength—Average shall be not less than—— points." This change makes the statement more exact and clear.

The three kinds of safety papers, USMO safety, USMO writing, and USMO safety writing, have been grouped together and made alike as to stock composition. This has been done because all of these papers are used for much the same purpose and often together.

Several new classes of paper have been added as follows: Rag opaque machine-finish 30-pound book, record manifold bond, onion-skin, white sulphite bond, jute tag board, and desk blotting paper, in order to introduce lower priced but good quality papers.

It has been deemed advisable to introduce into the specifications for white writing, tub sized, air or loft dried; colored writing, tub sized, air or loft dried; sulphite bond, white; stationery bond, white and colored, glazed and unglazed, tub sized, air or loft dried, the requirement that these papers shall have a certain folding endurance, which has been set at a relatively low figure for each class but sufficiently high to insure the delivery of paper which will be of satisfactory quality.

Where the specifications for wrapping paper and cardboard permitted more than 50 per cent of ground wood, the stock requirement has been stricken out, it being the sense of the Specifications Committee that such papers are of too low grade to need any stock limit and that the quality required is adequately controlled by the other requirements of the specifications.

Throughout the schedule the minimum order is specified on all lots of 40,000 pounds or less, and this minimum order is made as large as possible, bearing in mind the great uncertainty as to the needs of the Government Printing Office.

The Committee has given very careful consideration to the feasibility of stating with some definiteness in what quantity and at what periods paper under the larger lots might be ordered, but it has not been deemed feasible to state the minimum order for the larger quantities as the demands of the Government for the various kinds, colors, weights, and sizes of papers are absolutely dependent upon the printing activities of the several executive departments and of Congress itself.

The Specifications Committee wishes to again bring to the attention of the Joint Committee, for possible consideration, the matter of making awards in such a way that the large and small lots under any class may be equitably distributed among bidders, rather than to award the large and more desirable lots to one bidder and the small, less than carload lots, to another. The interests of the Government might be better served at times by considering together all the bids of a single bidder on any class of paper, rather than by considering individual bids on individual lots.

This schedule embraces 152 lots as against 141 lots last year, and the quantity estimated for the full year is approximately 42,826,000 pounds, as against approximately 36,800,000 pounds for 1923.

Estimates of Quantities

The approximated estimated quantities of paper which will be wanted are as follows:

3,040,000 pounds standard news print paper.
9,250,000 pounds machine-finish book paper.
1,000,000 pounds plant-fiber machine-finish book paper.
1,050,000 pounds antique book paper.
200,000 pounds opaque machine-finish book paper.
150,000 pounds rag opaque machine-finish book paper.
1,550,000 pounds rag machine-finish book paper.
2,990,000 pounds supercalendered book paper.
10,000 pounds rag supercalendered book paper.
125,000 pounds halftone book paper.
480,000 pounds coated book paper.
1,500 pounds white French folio paper.
500,000 pounds U S M O safety writing paper, blue.
8,000 pounds U S M O writing paper, white and blue.
4,000 pounds safety writing, colored.
1,425,000 pounds sulphite writing paper, white and colored.
5,080,000 pounds white writing paper, air or loft dried.
1,200,000 pounds colored writing paper, air or loft dried.
2,500 pounds fine white writing paper, loft dried.
90,000 pounds lithograph-finish map paper.
280,000 pounds manifold bond paper, white and colored.
5,000 pounds onionskin paper.
823,000 pounds bond paper.
1,000 pounds parchment deed paper.
1,080,000 pounds ledger paper.
1,500 pounds white tissue paper.
600 pounds facing stero tissue paper.
380,000 pounds cover paper.
4,000 sheets cloth-lined cover paper.
1,693,000 pounds manila sulphite, and kraft paper.
240,000 pounds manila tag board.
65,000 pounds cardboard.
941,000 pounds bristol board.
7,500,000 pounds U. S. Postal Card bristol board, cream.
13,000 pounds index bristol board.
1,500 pounds white paraffin paper.
4,250 pounds noncurling gummed paper.
13,000 pounds blotting desk blotting paper.
3,000 pounds stereotype molding paper, white.
2,500 pounds stereotype molding paper, red.
20,000 pounds offset paper, for web presses.
17,000 pounds manila tympan paper.
2,500 pounds plate-wiping paper for embossing presses.
6,000 pounds back lining paper.
2,000 pounds red pressboard.
25,000 pounds gray pressboard.
500 pounds news board.
700,000 pounds chip and strawboard.
60,000 pounds box board.
770,000 pounds binder's board.
20,000 pounds trunk board.

Named by U. S. Chamber of Commerce

Dr. Hugh P. Baker, Executive Secretary of the American Paper and Pulp Association and Colonial W. DuB. Brookings, Manager, Natural Resource Production Department of the Chamber of Commerce of the United States, of whose departmental committee Dr. Baker is a member, have been named to represent the Chamber at the coming national standardization conference to be held in Washington, under the auspices of the Department of Commerce.

Work of Woodlands Section

The Woodlands Section of the American Paper and Pulp Association has issued over the signature of its secretary, O. M. Porter, a statement relative to the work of the section, which reads, in part, as follows:

The Woodlands Section was organized in November, 1920, to meet the need of a department in the association to handle problems common to the woods operations of the paper industry. Its purposes are as follows:

1.—To increase the efficiency of the woods operations of the pulp and paper industry.

2.—To encourage the practice of forestry on timberland holdings.

3.—To provide a medium for the gathering and dissemination of information which will promote the permanency of the woods operations of the pulp and paper industry.

Following is a partial list, by general subjects, of the information which the Woodlands Section has developed for its members:

A—FOREST OPERATIONS.

1. Economy of 4 ft. vs. long log operation.
2. Tugs and booms for open water towing.
3. Methods of sorting 4 ft. pulpwood.
4. Brush disposal.
5. Volume losses from barking.
6. Driving burch and poplar pulpwood.
7. Peeling practices for Southern pine.
8. Shrinkage in cutting up 16 ft. logs.
9. Sinkage on drives and in storage.

B—FOREST PROTECTION.

1. The spruce budworm; identification and methods of control.
2. Timberland insurance.
3. Fundamental forest education.

C—FOREST INVESTIGATIONS.

1. Forest investigations; What, Where and by Whom.
2. Number of sticks per cord.
3. Pulp wood decay.
4. Cubic ft. space of piled pulpwood.
5. Adirondack spruce increment.
6. Reforestation; methods, costs and yields.
7. Forestry for the paper industry.

D—STATISTICS.

1. Quarterly pulpwood reports.
2. Imports of pulpwood and wood pulp.

The section feels that the paper industry could well afford to finance its activities as a clearing house for information on woods operations.

The paper industry must pay more attention to its wood operations. The Woodlands Section can serve the industry in keeping it informed, in preventing duplication in its woods experiments, and in corelating the data collected by all the several agencies now interested in woods operations and woods investigations.

Want Paper Man Appointed

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 12, 1923.—It is understood that a number of letters have recently been received by Chairman Marvin, of the United States Tariff Commission urging the appointment of a paper man to have charge of any paper complaints reaching the Commission.

This matter has been before the Commission several times but Mr. Marvin stated the other day "that there is nothing in sight in this connection at the present time." He said that since news print has been put on the free list there has not been so much interest in the paper schedule as there used to be. He said that it was possible that a paper man would be selected at some later date but no one is being considered at the present time.

DECEMBER PROVING A SLOW MONTH FOR CHICAGO TRADE

Coated Book and Label Undergo Slight Reduction But Prices Generally Hold Firm—Paper Stock Association Discusses Classifications of Waste Paper—Charter Received for Waste Materials Exchange, Inc.—D. J. Gallery Joins Sales Department of Chicago Mill and Lumber Co.—James P. Tyrrell Now Connected with Bermingham and Prosser Co.—New Hoberg Toilet Holder.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., December 10, 1923.—December is considered by the greater majority of Chicago paper houses as a slow month. As a matter of fact, the demand is usually expected to fall off somewhat all the way to the first of the year. Both the holidays and inventory season are credited with bringing about such a condition. A report that printers were getting busier during the early part of last week was discredited by some of the paper men who stated that this class of trade had given no indication of needing stocks. Outside of the sulphite bond and ledger reductions which took effect a few weeks ago, no others are reported. However, it is said that coated book and coated label may be procured at eight cents this week instead of 8½ cents. Prices hold fairly firm.

No further cuts have been made on paper boards. Nor is any quickening in demand expected before another thirty days. Coarse wrapping papers are not in strong demand either. It was reported that a lot of new kraft is coming into the Chicago market and with the plentiful supply already available, it is evident that prices will not go upward. Although prices on several items of waste paper stock strengthened a trifle it was said that the demand is not better than the week previous.

Twine Market Fairly Active

The market for twine in the Chicago territory was stated to be fairly active. However, orders coming in through the mails are depended upon considerably right now to build up the sales volume. In other words, this means that paper mills are buying only what they need. Prices are holding firm on jute and flax twine but they are very high on cotton. The first half of December was about normal but the second half dropped off perceptibly and was expected to continue so until the first of the new year.

Paper Stock Association Meets

At a meeting of the Paper Stock Association of Chicago, held at the Lexington Hotel, Tuesday, December 4, standard classifications for waste paper and ways and means for a continuation of open trading by the paper stock packers and the consumers of their product were subjects for discussion. Since the close of trading on the Paper Industries Exchange, following announcement of a proposed reorganization to be known as the Boxboard Association, the waste paper group has been active in an effort to devise means toward standardization of their industry.

Waste Materials Exchange Chartered

About a week ago a group of Chicago paper stock dealers applied to the Secretary of State for a charter to operate an exchange for open trading in the lines of paper stock they handle. This open trading will be resumed within a few days through the medium of the Waste Materials Exchange, Inc., a corporation not for profit. Francis Hughes, of the Francis Hughes Company, announced that a charter has been received from the Secretary of State and plans are now being completed to resume operations, possibly within a week. Those interested in it were the ones previously interested in the Paper Industries Exchange.

It is planned to have open trading not only in waste paper, but also in all the other staple items of waste materials, including scrap iron, rubber, metals and rags. The membership of the new exchange is to be divided into groups or divisions, each division trading in some particular commodity. The headquarters of the new exchange have not as yet been selected, but it is announced that the plan is for the divisions to get together, possibly three times each week. The first meeting will be held for the purpose of organization. Officers will be elected.

D. J. Gallery Resigns Position

D. J. Gallery, who has been acting as secretary and treasurer for the Western Board Division, which includes the Chicago territory, of the American Pulp and Paper Mill Superintendents' Association, resigned recently. Mr. Gallery is no longer a mill superintendent, being now in the sales department of the Chicago Mill and Lumber Company.

Tyrrell with Bermingham and Prosser

James P. Tyrrell, who until November 1 owned the controlling interest in the Weir Brothers Paper Company, Chicago, large dealers in coarse wrapping papers, sold his interest in that concern to Joseph Murname, of the Murname Paper Company, and is now associated with the Bermingham and Prosser Company, in the sales department. The Bermingham and Prosser Company handles only high-grade paper, and Mr. Tyrrell says he feels more at home selling this kind of paper than the other, for he has always been interested in it. Prior to Mr. Tyrrell's connection with the Weir Brothers Paper Company he was was in the Chicago office of the International Paper Company for nineteen years.

Robert T. Weir and Nelson Foley, both of whom owned the balance of stock in the Weir Brothers Paper Company, have also sold their interests, it is reported, to Mr. Murname. Mr. Murname will operate the business under the old name, handling the same kind of paper.

Dick Crotteau Is Manager of Sales

Dick Crotteau, who is well-known to coarse paper men throughout the middle west, is now manager of sales for the Calcasieu Manufacturing Company, of Elizabeth, La. It is advised that this is a new kraft wrapping paper mill. Mr. Crotteau is making his headquarters in Chicago at 30 N. La Salle Street.

Hoberg Co. Puts Out New Toilet Holder

A new and unique container for toilet paper has just been devised and is now being manufactured by the Hoberg Paper and Fibre Company of Green Bay, Wis. The information comes through H. G. Wintgens, manager of the Chicago office. The Hoberg company has for some time produced toilet tissues in folded form for use in public lavatories. This same folded tissue is now being packed in a small cardboard container for use in homes, hospitals, for tourists and summer camps. The container is 4½ inches wide by 4½ inches high and three inches thick. The top is sealed shut. In the bottom there is a narrow slit through which the paper is drawn forth, each sheet pulling out the edge of the next one as it is taken out. A gummed paper is pasted over this slit until ready for use, when by running the thumb nail across the label the edge of the first sheet is loosened and the container ready for use. In the top a wire loop is provided so that the container may be hung on the wall on a hook or nail. The package then operates exactly the same as the metal containers used in all public places.

This is a brand new idea. It is being sold under the name of the "Evergreen Spruce Lavatory Tissue." Each container holds 750 fold sheets, 4½ by 5½ inches in size.

New Incorporation

The St. Charles Paper Box Company, St. Charles, Ill., has been incorporated with a capital stock of $25,000 to manufacture set-up and folding boxes. The incorporators are: A. W. Chaffee, Louis Rockwell and Harry Hempstead. It is reported the company will take over the plant formerly occupied by the Robbins Paper Box Company.

CANADA ENTHUSIASTIC OVER CONDITIONS IN NEWS PRINT

Present Consumption Figures Most Gratifying and Prospects for 1924 Exceedingly Bright—Bank of Hochelaga Official Replies to Sir Frederick Becker—London Times Denies that It Is User of German News Print—Riordon Co. Back of Chelsea Power Development—No Extensive Losses in Affairs of Bay Sulphite Co.—New Brunswick to Have Paper and Pulp Plant.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., December 11, 1923.—Paper stocks continue to be in the limelight on the Montreal Stock Exchange and have shown the nearest approach to a boom that has been in evidence for several years past. The fact that prices have been now fixed for the first six months of 1924 at the prevailing quotation of $75 per ton offers indications of improved earnings for next year. Under the $75 price, mills have been making a good profit and, if the demand keeps up, next year should be a good one for the companies. It has been a matter of some little surprise that news print consumption has been keeping at such a consistently high level. Of course, the Christmas advertising is affecting the demand at the present time and the question now is as to what is going to happen after the Christmas business is over. There are many who think that there will be a marked lull in business with consequent curtailment in the use of news print but, if the demand continues at such a good average as for the past six months, then the prosperity of news print companies is assured.

Sir Frederick Becker's Ventures

Beaudry Lemain, General Manager of the Bank of Hochelaga, Montreal, has issued a public reply to statements by Sir Frederick Becker in England in which he mentioned the Bank of Hochelaga as in part responsible for the failure of Becker & Co. and subsidiary concerns. Mr. Lemain says:

"We are at a loss to understand why the name of the Bank of Hochelaga should have ben brought forward in connection with the difficulties encountered by Messrs. Becker & Co. and associated companies. We must assume that conditions in England are somewhat similar to our own and that it is necessary in all cases where the judgment of individuals is found at fault to blame a bank or all the banks. It is one of the unsolicited functions of banks to act as scapegoats to be charged with all the sins of Israel.

"We have never been the bankers of Sir Frederick Becker or his companies and have felt for a long time that if the large and powerful London banks were not inclined to grant additional credit for his industries operating in Great Britain, it would be elementary caution for a Canadian bank to watch its step.

"When the climax was reached we were not taken unawares, but we must state that one thing did surprise us. Sir Frederick Becker resigned as president and director of Becker & Co., Limited, only a few weeks before a receiver was appointed and we had yet to hear of a British captain deserting his ship at the approach of a storm.

"If it affords a measure of consolation to Sir Frederick Becker to endeavor to shift from his shoulders the responsibility which properly rests there unto parties who are three thousand miles away from the scene of his activities, he is of course at liberty to do so. Such a course is not, however, in our estimation in accordance with the best traditions of British fair play."

Will Not Take German News Print

A cable from London published here states that in a denial of the assertion made during the election campaign that the London *Times* obtained its news print from Germany, John Walters, one of its owners, stated that the *Times* gets 75 per cent of its paper from Canada and Newfoundland and the remainder from Scandinavia, and none from Germany, although German paper was offered at very low prices.

Riordon Co. Behind Power Development

Work should be commenced shortly on the Chelsea power development of the Riordon Company on the Gatineau River. This site is capable of developing about 120,000 h.p. and it is likely that a separate company will be organized to develop the property, and which will be controlled by the Riordon Company.

Future of the Bay Sulphite Co.

In connection with the affairs of the Bay Sulphite Company, no definite statement is available, but it is hoped to avoid any extensive losses and to arrange contracts to take up the whole production. The plant has been operating at just about capacity, and much pulp has been sold in the States. Parties connected with the sale of the bond issue are reticent, not wishing to buoy up investors with false optimism nor to cause concern regarding a situation that may easily right itself.

Paper Stocks Distributed

Shareholders of the Kaministiquia Power Company have received the certificates of their stock in the Kakabeka Securities. This stock was given them as a bonus last month, when the Ontario Hydro-Electric Commission brought its Nipigon plant at Cameron Falls to the city of Port Arthur, which had previously been taking power from the Kaministiquia Company. This made it necessary for Kam Power to seek new markets, and arrangements were made with interests associated with Spanish River Pulp and Paper Company to promote a news print paper company at the head of the lakes. The Kam Power Company took a substantial amount of bonds of the company, and in the process got a good block of shares, which it has been carrying on its books at the sum of $1. It was decided that as the stocks were not needed for the business of the company, and has no present market value, they should be distributed to the shareholders of the Kaministiquia Power Company and in order to facilitate the distribution the Kakabeka Securities was formed. The Kam Power holdings of Fort William issued its entire capital stock to the Kam Power shareholders on the basis of one share of no par value stock for each of Kam Power stock that was held. Capitalization of the Fort William Paper Company consists of $2,100,000 of 7 per cent first mortgage bonds; $1,000,000 of 6 per cent second mortgage bonds; $1,100,000 of 8 per cent cumulative preferred stock, and $4,000,000 of common shares. The notice from the Kaministiquia Power Company to its shareholders pointed out that there is no present market for the securities of the Fort William Paper Company and that, therefore, shareholders cannot be advised as to the present value of the shares distributed to them; their prospective value depends entirely upon the future success of the paper company's enterprise.

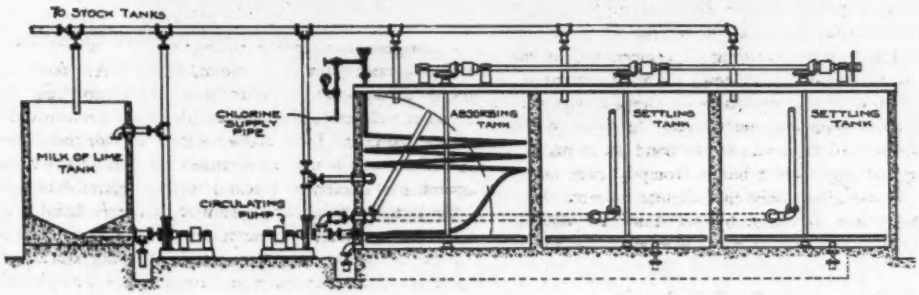
Pulp Plant for New Brunswick

Preliminary work on the construction of a large pulp and paper plant in St. Stephen, N. B., is being done by Hollingsworth and Whitney, of Boston. This company, which operates at Waterville and Madison, Me., has acquired extensive timber limits on the St. Croix River.

Albany Company to Erect Mill

Announcement has been made that the Albany Perforated Wrapping Paper Company of Albany, N. Y., has secured 60,000 acres of timberland at Sheet Harbor, Nova Scotia, where a big pulp mill is to be erected, employing when completed 75 men in the mill and 200 men in the woods. Work on the plant is to be commenced on May 1 next, and the cost will be approximately $250,000. The capacity will be 25,000 cords of pulpwood per month.

MATHIESON System



BLEACH LIQUOR PLANT USING LIQUID CHLORINE – MATHIESON SYSTEM

Your Present Bleach Equipment Is Readily Adaptable to the Use of Liquid Chlorine by the Mathieson System

IN THE above sectional drawing a typical bleach plant is shown converted to the use of the Mathieson System simply by the installation of the lead coil and liquid chlorine connections which are brought out in solid black. One of the settling tanks is made the chlorinating tank while the former bleach mixing tank is used without change for preparing the milk of lime which is then pumped to the chlorinating tank.

Liquid Chlorine from the Mathieson ton container or 150 lb. cylinder enters the lead coil through an expansion valve, vaporizes and is discharged into the suction line of the circulating pump. The heat of reaction between the chlorine and milk of lime is offset by the refrigerative effect of the liquid chlorine evaporating in the lead coil, thus keeping the temperature of the liquor within safe limits.

A few advantages of the Mathieson System are:

Solutions uniform in strength and of any desired concentration.
No formation of chlorates or over-chlorination.
No expensive equipment to adapt it to existing installations.
Elimination of complicated valves and control apparatus.
Simplicity and economy of operation.
Increase of safety factor by the provision of small-unit chlorine storage.

Our Technical Department will gladly demonstrate the greater safety and economy of this system.

Send for our new booklet: "Mathieson Chemicals for the Pulp and Paper Industry."

THE MATHIESON ALKALI WORKS, *Inc.*

25 WEST 43rd STEET — NEW YORK CITY
PHILADELPHIA — PROVIDENCE
CHICAGO — CHARLOTTE

Deal Direct with the Manufacturer

Bicarbonate of Soda — Sesquicarbonate of Soda
Liquid Chlorine-Caustic Soda — Bleaching Powder-Soda Ash

HAMMERMILL CO. PRICE CUT PHILADELPHIA TRADE TOPIC

Announcement of Reduction in Price of Sulphite Bonds Followed by Downward Revision on Part of Two Other Companies—Trade Conditions, However, Were Little Disturbed and Values Generally Remained the Same—Vice-President Howard W. Taylor to Leave Dill and Collins on January 1—Graphic Arts Bureau to Be Formed—John Null Killed by a Train at Delair, N. J.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., December 12, 1923.—Contrary to expectations, conditions in the fine paper distributing industry during the week were little disturbed by the reduction of ten per cent and upward in prices by the Hammermill Company on its line of sulphite bonds. The tactical position of this line is such that in trade opinion any move by it has a bearing on the entire industry. It is true that closely following announcements of the Hammermill reduction there came also news of a downward revision by the Brown Company and the Eastern Company, but save for these instances, values remained unchanged. In view of the importance of the Hammermill reduction in the bond paper market, representatives of rag and rag content bonds promptly gave notice that price reductions would affect only the sulphite variety. Formal notice to this effect was circulated by the American Writing Paper Company with the announcement that there would be no reduction in its prices.

Values in the coarse paper market also remained without substantial change during the week although there were one or two isolated reductions of small amounts in Kraft paper. Values generally are weak on all coarse papers and demand by no means is active.

Taylor Leaves Dill and Collins

One of the most important and interesting developments in recent annals of the trade came this week in the announcement that at the close of the month Howard W. Taylor, referred to by the trade as "the last of the old guard," will resign his position with Dill and Collins. He is a vice-president of that concern and is its manufacturing manager. While admitting his intention to resign, Mr. Taylor will not at this time officially confirm the fact known by the trade to be authentic, that on January 1 he will become president of the W. C. Hamilton and Sons Company which conducts the paper mill at Miquon, formerly Lafayette, on the Schuylkill River just above Manayunk. On the inauguration of Mr. Taylor, the present president, Samuel L. Hammer, who came to the company about a year ago upon the retirement of Freas B. Snyder, will fill the position of treasurer. Changes in the personnel, it is believed, will inaugurate a large development in the Hamilton business.

Trade Attends Memorable Meeting

Every fine paper house in Philadelphia was represented at a get-together conference and luncheon held on Wednesday noon of last week in the Hotel Adelphia and the result of this was a unanimous vote by several score of printers, paper distributors, electrotypers, photo-engravers, machine composition houses, roller makers, printing press makers and type founders to organize "The Graphic Arts Bureau," a credit and collection agency. The meeting was the result of a call issued by William Sharpless, chairman of the Typothetæ Trades Relations Committee.

There follows a list of those in the paper trade who attended the conference and who unanimously expressed their approval of the Graphic Arts Bureau:

Irwin P. Megargee, Curtis and Brother, Inc.; John R. Kohl and Howard Satterthwaite, Garrett-Buchanan Company; J. V. Smith, A. Hartung and Company, Inc.; Frederick S. Balch, The Keystone Company; David Lindsay, Jr., Lindsay Brothers, Inc.; A. M. Russell, Molten Paper Company; T. E. Sheehan, Paper House of Pennsylvania; Norman W. Fort, Thomas W. Price Company; W. C. Chadwick, Raymond and McNutt Company; Arthur B. Sherrill, Riegel and Company, Inc.; Ralph G. Luff, D. L. Ward Company; W. S. Wilcox, Wilcox-Walter-Furlong Paper Company; Douglas W. Bond, Dill and Collins; C. L. MacCalla, Jessup and Moore Paper Company.

John Null Killed by Train

John Null, assistant superintendent of the plant of the Philadelphia Paper Manufacturing Company, Manayunk, was fatally injured at Delair, N. J., when a Pennsylvania Railroad train crashed into the automobile he was driving, ground it to pieces and terribly mangled its occupant. Null was rushed to Cooper Hospital in Camden, dying there shortly after his admission. He was but 33 years old and was a brother-in-law of Ward Smith, superintendent of the Manayunk mill.

Hear from Norbert Considine

A cablegram was received during the week at the Paper House of Pennsylvania from its president, Norbert A. Considine, who is now in London. Mr. Considine is on a visit to French and English paper mills and selling agents of other European mills located in these countries. Incidentally he is acting for the Poor Richard Club of this city in making arrangements for its attendance at the Convention in London next year of the Associated Advertising Club of the World. President Considine sails from London tomorrow on the *Berengaria* and is due in this city on December 18.

Arthur H. Nevius, well known to the Philadelphia trade by reason of long residence here and now connected with the Miami Paper Company visited the trade during the week. Others who called included R. E. Rudd, manager of sales of the Eaton-Dikeman Company of Lee, Mass., and T. L. Harrocks of H. Reeve Angel & Co., New York.

John A. Datz, head of A. S. Datz & Co., went on a hunting trip on Delaware Bay and now his friends are enjoying the distribution of 72 ducks.

Promoting Battle Creek Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., December 12, 1923.—A paper mill for Battle Creek is being promoted by Harry Zimmerman, brother-in-law of Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company, and a former employe of that concern.

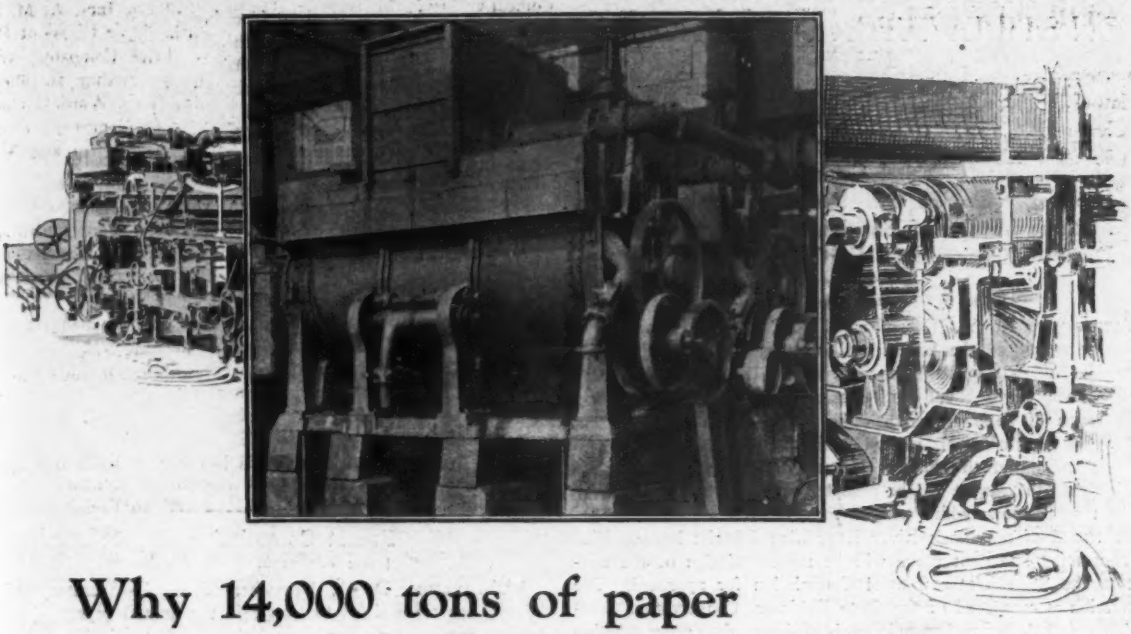
The new mill is to cost $1,500,000 and will be designed to make a grade of parchment and wax paper, a product that is largely used by the Postum Cereal Company and the Kellogg Toasted Corn Flakes Company.

Mr. Zimmerman came to Kalamazoo in 1919, organizing and managing the Kelamazoo Vegetable Parchment Company, "now one of the greatest in the country." He has worked out his plans for his new parchment mill and claims it will save annually $75,000 over the most efficient parchment mill now operating in America.

Disposes of Embossing Line

MENASHA, Wis., December 12, 1923.—The McGillan-Asmuth Paper Mills, Inc., manufacturers of toilet papers, paper towels and paper napkins has disposed of its embossing glassine equipment to The Paper Novelty Company of Green Bay, Wis.

The Menasha concern is contemplating increasing its production of its main line which is produced on its own paper machines and as the embossing grade was strictly a converted specialty taking too much efforts from the McGillan-Asmuth main products it was decided to dispose of the embossing equipment to The Paper Novelty Company which has one of the largest and most efficient converting plants in the Middle West.



Why 14,000 tons of paper pass through BIRD SCREENS daily

BIRD Screens keep the head box well supplied with a homogeneous mixture of clean stock.

Quality is uniform.

Wet breaks caused by lumps or slime are reduced to a minimum.

Production is increased because with Bird Screens it is continuous.

Bird Screens are self-cleaning. No shut-downs required to wash screen plates during the week.

Operating expense is reduced because the Bird Screens are simply and ruggedly built and there are few repairs. The capacity is large and the power requirements are small.

If you have a screening problem the Bird Screen catalog will help you out.

Some of the people who use

BIRD SCREENS

International Paper Company—Newsprint —73 screens

Fitchburg Paper Company Book Paper—6 screens

Kalamazoo Vegetable Parchment Co. Sulphite Bonds—8 screens

Gilman Paper Company Newsprint and Kraft —5 screens

BIRD MACHINE COMPANY

South Walpole **Massachusetts**

Western Representative
T. H. Savery, Jr., 1718 Republic Bldg.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Ltd.
260 St. James Street
Montreal, Canada

BIRD SCREENS

5907

SCOTT BROTHERS BID LOWEST ON STILLWATER DAM PROJECT

Board of Black River Regulating District Opens Seven Bids and Scott Brothers Was Found to Be Lowest, the Figure Being $226,131.25—Contract Let Subject to Approval of State Water Control Commission—John N. Carlisle Receives Notice of His Reappointment by Governor Smith as Member of Board of Black River Regulating District—Appointment Is For Three Years.

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., December 12, 1923.—Scott Brothers of Rochester submitted the lowest bid for construction of the Stillwater dam and will probably be awarded the contract. The Board of the Black River Regulating District met to receive bids and found seven of them on hand. The bid by Scott Brothers was $226,131.25 for the entire job while Burns Brothers & Haley of this city submitted the highest bid of $397,297. It is not imperative that the lowest bid be accepted, but it is considered very certain that the low bidder will do the job.

The Board of the Black River Regulating District has awarded the contract. The next move will be the submission of the contract to the State Water Control Commission for approval. The commission is composed of the State Engineer, Conservation Commissioner and Attorney General. It is desirable that prompt action be taken so that the successful bidder may be enabled to get machinery and heavy materials on the ground by sleighs this winter.

J. V. Baron, chairman of the Board, presided and J. N. Carlisle, Attorney D. M. Cosgrove and Secretary E. S. Cullings constituted the official personnel. Secretary Cullings remarked after the meeting that the bids were considered very favorable and that the low one would probably be accepted.

Among those present to hear the bids read were: H. R. Dwyer of the T. F. Breslin Company, E. M. Ellis of Buffalo, J. L. Hogan of the Foundation Company, George Burns of Burns Brothers and Haley, G. J. Walker of the Troy Public Works Company, F. J. Shepherd of the Suburban Engineering Company, R. W. Jones of the V. G. I. Contracting Company, I. I. Ridgway of the Portland Cement Company, L. B. McNulty of the Athens Portland Cement Company and B. W. MacDonald of the Knickerbocker Portland Cement Company.

The List of Bids

The bids received were as follows:

Burns Brothers & Haley, city	$397.297.00
Frederick Snare Corp., N. Y. C.	$366,506.80
U. G. I. Constructing Co., Philadelphia, Pa.	$295.028.00
R. W. S. Corp., N. Y. C.	$294,045.00
Troy Public Works Co., Utica	$274,463.40
Suburban Engineering Co., N. Y. C.	$248,655.00
Scott Brother, Rochester	$226,131.25

It will be noticed that Scott Brothers' bid was $22,523.75 lower than the next higher one. It was $171,165.75 lower than the highest bid.

The formality of awarding the contract for the construction of the Stillwater dam was carried out at a second meeting of the Board of the Black River Regulating District. At that time Scott Brothers Construction Company of Rochester, lowest bidder, was awarded the contract for $226,131.

The Board reserved the right to reject all bids, but the one accepted was considered very reasonable. As soon as the contractor supplies a bond of 20 per cent of the amount of the contract, the bond will be forwarded to the Water Control Board for approval. It is expected that the deal will be closed in the near future so that actual operations may be undertaken by the contractor.

John N. Carlisle Reappointed

Official notice was received Tuesday by John N. Carlisle from the office of Governor A. E. Smith of the appointment of Mr. Carlisle as a commissioner of the Board of the Black River Regulating District. The appointment is for three years.

When John B. Taylor resigned two years ago Mr. Carlisle was appointed to fill the vacancy. The term expired last September and he has been holding over under the law pending the appointment of his successor. The announcement of Tuesday was expected, for Mr. Carlisle has been one of the very valuable members of the Board. He is president of the Northern New York Utilities, Inc., which owns the most important power rights in the district and which must pay the largest percentage of the cost of water storage development now being perfected.

J. Victor Baron, vice-president and general manager of the Sherman Paper Company and head of the Carthage Sulphite Pulp & Paper Company, is president of the Board and Harry S. Lewis of the H. P. Lewis Paper Company at Lyons Falls is the third member. It is expected that regulation of the Black River will be available for the summer of 1925. The appointment of John N. Carlisle to continue on this Board is regarded as favorable to the early completion of the project.

Forest Commission Report

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 12, 1923.—Secretary of War Weeks has transmitted to Congress the annual report of the National Forest Reservation Commission. It is a coincidence that Secretary Weeks, who is now president of this commission, should have been while in Congress the author of the law under which more than 2,000,000 acres of land have been purchased for eastern National Forests.

During the past year, according to the report, with an appropriation of only $450,000 the purchase was authorized of 79,900 acres at an average price of $4.35 an acre, this being the lowest average price at which lands have been acquired except during the previous fiscal year. The acreage acquired was the smallest in any single year, except during the World War, since the Commission began buying forest lands 11 years ago. The total acreage which has now been acquired in 11 eastern states amounts to 2,205,027 acres, the average price being $5.03 an acre.

The report shows a comparison of the cost of the land and timber which have been acquired by the Government and its estimated present value. The total cost including the cost of administration and fire protection during the past 11 years, or since the inception of the work, amounts to $14,393,000. The total receipts to date have amounted to $586,282. The estimated present value of land and timber is $20,622,000, thus indicating a net gain in value of $6,228,000.

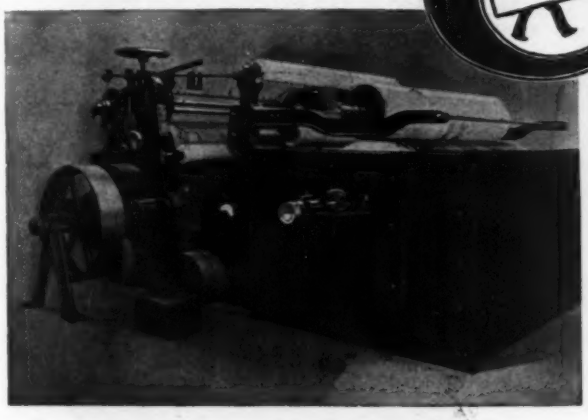
In determining appreciation in value no increase has been allowed for any increase in the value of land, the increase being entirely caused by the increase in the value of timber and such increase as has taken place in the growth of timber. It is likewise brought out that the receipts from the sale of timber are practically limited to sales of low grade timber, the removal of which is beneficial to the Forests.

The Commission recommends the establishment of additional purchase units in states in which no purchases are now being made with a view to demonstrating methods of management to the private owners. The location at an early date of National Forest purchase units in Kentucky is particularly urged, Kentucky having already passed legislation necessary for the establishment of such forests.

Hydrate Plant Destroyed

LEE, Mass., December 11, 1923.—The hydrate plant of the Lee Lime Company on Marble street was totally destroyed by fire Thursday entailing a loss of $50,000.

Famous Products Series No. 3.



Cornell Wood Board

The Valley Wet Machine

One operator writes, "When two of your Wet Machines take the place of five others, what more can a paper manufacturer ask?" Valley Wet Machines are the heaviest and strongest on the market and due to their weight and design, vibration is minimized. The vat is so made as to prevent leakage. The felt roller bearings are self-aligning.

A pamphlet telling more about the Valley Wet Machine will be sent on request. Write for it today.

Valley Iron Works Co. Equipment *is* Used *in making* Cornell Wood Board

Utility, strength, and economy, are three factors that have given Cornell Wood Board a nation-wide popularity. These three characteristics are built into the product and come as the result of the manufacturing methods used in the production of Cornell Wood Board.

Among the Valley Iron Works Company Equipment used by the Cornell Wood Products Company are Valley Wet Machines and these pieces of equipment have the same characteristics of economy, strength, and utility possessed by the product that they help manufacture.

Valley Iron Works Company

Builders of Pulp and Paper Making Machinery.

Plant: APPLETON, WIS.

New York Office: 350 MADISON AVENUE

GOVERNMENT PAPER BIDS AND AWARDS

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 12, 1923.—The Government Printing Office will receive bids on December 17, for 44,000 lbs. (4,000 reams), 21 x 32, 36, No. 20 white sulphite writing paper.

The Government Printing Office has received bids for 72,900 lbs. various sizes sulphite manila paper as follows: Reese and Reese, $.06775 and $.0726; Old Dominion Paper Company, $.0674, $.0649, $.0679, $.0799; Wilkinson Brothers, $.0589; Maurice O'Meara Company, $.0637; R. P. Andrews, $.0695; Samuel S. Alcorn, $.0565, $.059; Coy, Disbrow & Co., $.0641; T. A. Cantwell & Co., $.0653, $.0628, $.0653; Trinity Bag and Paper Company, $.0578.

The Printing Office also received the following bids on 4,200 lbs. Manila tag board, 22½ x 28½ 140 flat: The Whitaker Paper Company, $.086, and the Broderick Paper Company, $.0995; Dobler and Mudge, $65, f. o. b. Carthage, N. Y.; Old Dominion, $.0699 and $.0859; Reese and Reese, $.10945; Mathers Lamm Paper Company, $.1195; Samuel S. Alcorn, $.1085; R. P. Andrews Paper Company, $.067; American Writing Paper Company, $.105; Wilkinson Brothers & Co., $.0954.

The Government Printing Office will receive bids on December 14 for 134,000 lbs. (2,000 reams) No. 1, 38 x 48 67 white M. F. printing paper. Bids will be received on the same date on 116,000 lbs. (2,000 reams) 34 x 48 58 white opaque printing paper.

The R. P. Andrews Paper Company has been awarded the contract by the Government Printing Office for furnishing 17,850 lbs. (700 reams) of 17 x 28 25½, No. 20 white sulphite writing paper at $.0692 per pound, bids for which were opened on November 28.

The Government Printing Office will receive bids on December 19, for 550,000 pounds of No. 1 M. F. printing paper and 36,000 yards of various sizes best quality binders board, and for 1,200 pounds of 17 x 22—24 fine white glazed bond paper.

The Printing Office will also receive bids on December 21, for 80,000 pounds (80,000 sheets) 26 x 38, No. 50, chip or straw board.

The Government Printing Office has received the following bids for 500,000 pounds white news print paper, basis 24 x 36—32 in 48-inch rolls, 800 pounds each: Reese and Reese $.04015 per pound; Import Paper Company, $.045 f. o. b. Mill; Tidewater Paper Mills Sales Corporation, $.041; Whitaker Paper Company, $.03988; Beaver Pulp and Paper Company, $.03958; R. P. Andrews Paper Company, $0422; the Wright Company, $.0412; Dobler and Mudge, $.0399; International Paper Company, $.0425; Gould Paper Company, $0375 f. o. b. Lyons Falls, N. Y., and $.04165 Washington; Old Dominion Paper Company, $.04189.

Also on 500 pounds of red stereotype molding paper, 19 x 24—20, 500 sheets to the ream, flat, the Printing Office received the following bids: Whitaker Paper Company, $.142 per pound; Wilkinson Brothers & Co., $.153; Sutphin Paper Company, $.16; American Writing Paper Co., $.10.

The following bids were received on 11,700 pounds of map paper: H. A. Lengnick, $.22675; American Writing Paper Company, $.1911; Reese and Reese, $.2019; R. P. Andrews Paper Company, $.20; Dobler and Mudge, $.16; Old Dominion, $.16999, Barton, Duet and Koch Paper Company, $.168.

Bids on 340,000 pounds white machine finish printing paper, No. 1, 24 x 38—34 were: Allied Paper Mills, $.07045 per pound and $.07295 (case); Bryant Paper Company, $.0715 and $.074; International Paper Company, $.069 and $.0715; Old Dominion Paper Company, $.07194; R. P. Andrews Paper Company, $.0624 and $.0649; Dobler and Mudge, $.066 f. o. b. Mill and $.0685; Kalamazoo Paper Company, $.07 and $.0715; Champion Coated Paper Company, $.0657 and $.0682; Champion Fibre Company, $.0679 and $.0719; Perkins Goodwin Company, $.0658 and $.0683.

The Bureau of Supplies and Accounts, Navy Department, will receive bids on January 8, for 60,000 rolls of paper towels.

The Government Printing Office will receive bids on December 17 for 286,000 lbs. various sizes of white S. & S. C. printing paper.

The Government Printing Office will receive bids on December 19 for 7,500 pounds (150 reams) of 25 x 38—50, white antique printing paper.

Bids will also be received on the same date for 8,000 pounds of blue and white No. 16 machine dried writing paper in 8½-inch rolls and for 9,600 pounds (200 reams) of 20 x 25—48, flat smooth granite cover paper.

Making Reversible Tooth Sprocket

SANDUSKY, Ohio, December 10, 1923.—The Union Chain and Manufacturing Company has just placed on the market a reversible tooth sprocket which is intended to eliminate the inconvenience of changing a complete sprocket when the sprocket becomes worn out or unusable.

The new sprocket contains a set of removable teeth made of manganese steel. All that is necessary, when a tooth becomes worn, is to replace it with a new one requiring but a few minutes operation.

The sprockets are made both solid and split, either of cast steel or semi-steel, depending on the required service conditions.

Kraske Goes to Kapuskasing

William H. Kraske, who has been sulphite superintendent of Consolidated Water Power & Paper Company's Wisconsin Rapids, Wis., mill since it was built in 1920, has gone to Kapuskasing, Ont., to be connected with Spruce Falls Company, Ltd., the Canadian branch of Kimberly-Clark Company. The Kapuskasing mill has a capacity of 120 tons per day of easy bleaching sulphite.

Mr. Kraske is a member of TAPPI and is secretary of the Northwestern Division of the Superintendents' Association. His many friends will be interested in the change he has made.

Warren Will Filed

[FROM OUR REGULAR CORRESPONDENT.]

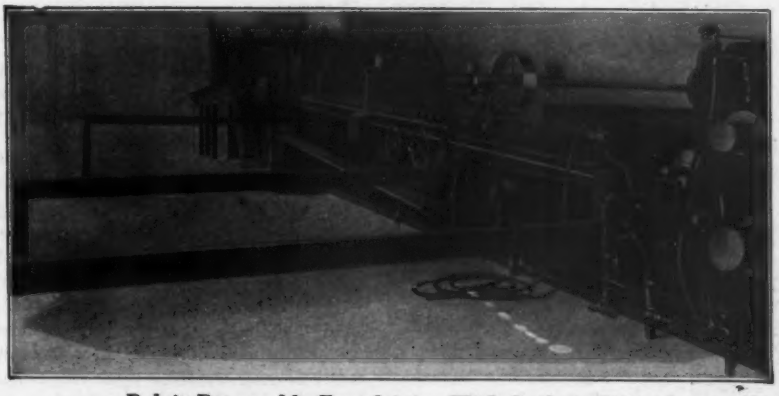
DALTON, Mass., December 11, 1923.—The will of William S. Warren who was for many years superintendent of the Crane & Co. mills has been filed for probate. The only bequest outside of the family is to Unity Lodge of Masons which receives $200.

BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS

A Revolutionary Invention!

BELOIT Removable Fourdrinier (patented)

On Machine Making 3 Tons per hour you Should Increase Your Sales $13,500 per year



Beloit Removable Fourdrinier With Rails in Place

You can change wires in one hour.

Saving, per change, 3 hours.

20 wires per year.

60 hours saved.

180 tons increased production.

$75 per ton, $13,500.

Five men (no extra help) can make change.

Labor saved per year, $420.00.

Send for special bulletin giving the facts.

The Paper Maker's Dream Come True!

No Heavy Lifting. Breast Roll, Table and wire Rolls, Suction Boxes not Disturbed

No Damage to Rolls or Bearings

No Grease or Oil on Wires

No Crimped Wires

Beloit Iron Works BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS **Beloit, Wis., U. S. A.**

Established 1858

Incorporations

R. A. Benime, Inc., Brooklyn, New York. To manufacture paper boxes. Capital $10,000. Directors: Frances Frasch, David Kraus and Rosalind Margolies.

Lippman, Volet and Lippman, Inc., Brooklyn, New York. To do a wall paper business. Capital $7,500. Directors: O. Volet, Isidore Lippman and Hyman Lippman.

Thomas J. McCormick Paper Corporation, Albany, New York. Incorporators, T. J. McCormick, C. B. Martin and C. T. Jewell.

Amherst Paper Company, New York city, New York. Capital $20,000. Incorporators W. Matthews and C. Littlefield.

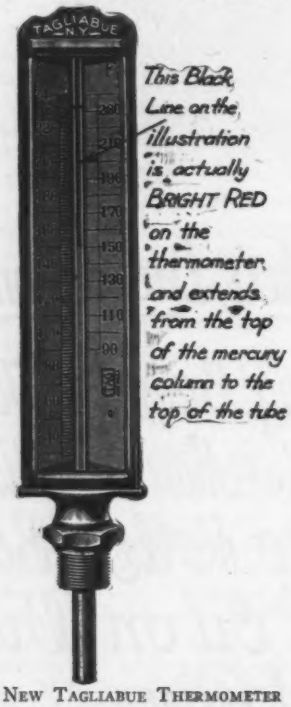
Commonwealth Paper Company, Inc., Providence, Rhode Island. To deal in paper. Incorporators: Fay R. Hunt, Bertha M. Hunt, Frederick A. Weigert and Gladys L. Weigert.

Something New in Thermometers

A new method of thermometer tube construction has been worked out by C. J. Tagliabue Manufacturing Company of Brooklyn, N. Y., in their mercury thermometers with the Tag-Hespe red reading column.

In these thermometers a broad red line shows from the top of the mercury column to the top of the tube. When the mercury rises it covers more of this red line. When the mercury falls a correspondingly greater length of the red line is exposed.

The decided contrast between this bright red line and the metallic grey of the mercury brings to the accurate mercury thermometer the easy readability of the red spirit instrument.


TAGLIABUE
N.Y.
This Black Line on the Illustration is actually BRIGHT RED on the thermometer and extends from the top of the mercury column to the top of the tube

NEW TAGLIABUE THERMOMETER

The Tag-Hespe thermometer's tubing of glass is in every way similar to ordinary lens front thermometer glass except that in the former the back of the fine capillary bore, up and down which the mercury travels, is made of bright red glass. This red streak of glass extends all the way from the top of the thermometer down to the bulb. The red glass is in the back of the bore and not at the back of the tube.

The red line attracts the eye at first glance and it is easy to follow it down and take the reading at the bottom.

Paper Exports for October

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 5, 1923.—The Paper Division of the Department of Commerce in discussing the paper exports during October says:

Exports of paper from the United States during October were valued at $2,118,841, an increase of approximately 5 per cent over those of September, 1923, and October, 1922. Shipments by quantity and value during the three months mentioned are shown in the following table:

EXPORTS OF PAPER FROM THE UNITED STATES DURING OCTOBER, 1923

	October, 1922		September, 1923		October, 1923	
	Quantity, Dollars	Value, Dollars	Quantity, Pounds	Value, Dollars	Quantity, Pounds	Value, Dollars
News print	2,260,546	108,674	2,388,067	112,953	2,246,965	109,884
Book paper, not coated	1,853,530	193,126	2,010,098	237,487	1,651,988	210,027
Wrapping paper, inc. kraft	2,706,109	181,927	2,042,653	168,390	1,744,339	146,018
Paperboard and Strawboard	3,651,122	167,736	4,811,107	217,386	4,911,220	210,440
Photographic paper	110,113	115,487	134,983	121,133	133,489	115,740
Boxes and cartons	647,245	79,225	1,021,018	96,219	1,114,465	117,333
All other	.....	1,173,933	.....	1,061,266	.....	1,209,399
Total	.....	2,020,108	.....	2,014,834	.....	2,118,841

As will be noted, the increase in the value of the October shipments as compared with the previous month are due to gains made by the lesser paper exports rather than to the leading item, which with the exception of boxes and cartons actually declined in value. Among the items listed under "all other" in the above table, which show an increase in value of shipments over last month might be mentioned: Cover paper, valued at $28,280; surface-coated paper, valued at $47,432; toilet paper, valued at $33,618; towels and napkins, valued at $31,667; sheathing and building papers, valued at $19,777; hanging paper, valued at $52,030; paper bags, valued at $93,910; carbon paper, valued at $61,917; playing cards, valued at $65,359, and cash register and adding machine paper, valued at $12,328. Shipments of kraft paper, notwithstanding the distinct decrease in other wrapping paper exports, also increased in value during October. On the other hand, exports of greaseproof paper, $17,106; bristols and bristol board, $7,496; wall board, $46,417; writing paper, $72,928; envelopes, $38,616, and papeteries, $10,483, have all declined in value during October as compared with last month, and bristols, writing papers, envelopes and papeteries as compared with October of last year.

Paper Laboratory Experiments

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 12, 1923.—Regarding the investigation of the sizing of paper some preliminary runs were made on the paper machine, says the Paper Laboratory of the Bureau of Standards in its monthly report. The runs varied the amounts of size used and the papers tested by the Curl method. Uniform results were not obtained. Apparently in making experimental machine runs, it is difficult to hold all factors constant so as to obtain comparative sizing results and additional preliminary work will be required in this respect. Also it was found that further modification of the tester is required. In connection with the use of glue in paper coating the Laboratory says:

"Owing to alternatives of the coating machine, found necessary by the preliminary runs, no additional machine runs were made. The necessary changes are to be made as soon as possible. Samples of coated paper on the experimental machine have been submitted to two different manufacturers, both of whom commented very favorably on the quality. Information has been received that a mixture of glue and casein is being used by some coated paper manufacturers. Several inquiries have been received regarding the progress of the investigation and there seems to be general interest in finding a substitute for casein."

Established 1886

Confidence

CONFIDENCE is an asset of paramount importance in mercantile and industrial development. The whole march of civilization rests, in last analysis, on the confidence that men repose in their governments, their laws, their institutions—and in each other.

Money and credit are confidence; orders, delivery dates, fulfillment of specifications—all these are confidence.

A business gains strength not only through an increasing clientele but through the increasing confidence of that clientele. And the only way to win this confidence is by maintaining a standard of merit throughout the years.

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Trade-Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

INDESTRUCTO—No. 184,714. Columbia Supply Co., Indianapolis, Ind. For chairs, benches, stools, desks, etc.

NEO-BLY—No. 183,867. Wagemaker Co., Grand Rapids, Mich. For desks, tables, stands, etc.

"DOMORE"—No. 183,102. Wm. S. Ferris, Elkhart, Ind. For office, household, and factory chairs.

Kraft Men Have Session

CHICAGO, Ill., December 12, 1923.—The Kraft Bi-Products Association of Minnesota, Wisconsin and Michigan Kraft Pulp Manufacturers met in Chicago at the Union League Club on Friday, November 30, at 10:30 A. M. Those present were: O. Bache-Wiig, Wausau Sulphate Fibre Company; L. M. Alexander and B. T. McBain, Nekoosa-Edwards Paper Company; J. H. Delbridge, Marinette and Menominee Paper Company; B. C. W. Forrester, Minnesota and Ontario Power Company; E. G. Goodell, Stevens Point Pulp and Paper Company; Gus Enderlein, Ontenagon Fibre Company; Prof. A. H. White of Ann Arbor, Mich.

The meeting was called to order by B. T. McBain, chairman.

The purpose of the meeting was for discussion of Prof. White's reports and recommendations and arrangements were completed for a committee composed of O. Bache-Wiig and B. T. McBain with Prof. A. H. White as third and consulting member, to immediately plan and erect a lime sludge recalcimining plant and to employ a competent engineer for the purpose. The names of two experienced lime plant engineers were suggested and, no doubt, one of these will be selected. This is only one of the Waste saving schemes to be gradually worked out.

It is said that the Bi-products in some industries are of more value than the original products. The Kraft Bi-Products Association hope to prove this in the case of the Kraft Pulp Industry.

Interstate Commerce Hearing

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 12, 1923.—The Interstate Commerce Commission has announced that a hearing will be held on January 7, at Pittsburgh, before Examiner Witters of the Commission in Docket 15,435, of the Niagara Wall Paper Company, and others against Macon, Dublin and Savannah and others.

Improved Plant of Western Board Co.

KALAMAZOO, Mich., December 11, 1923.—When the plant of the Western Board and Paper Company resumes production about January 1, 1924, it will be one of the best all around one machine board mills in the middle west. It will then boast a daily production of approximately 100 tons, the capacity having been advanced from 60 tons a day to the quantity above indicated.

"We will not only be able to make 66 2/3 per cent more board than at any time in our past career," remarked Winship A. Hodge, general manager of the plant, "but we have been able to improve the quality of our product through the improvements carried into effect.

"Our expansion campaign, which began about six months ago, has involved practically every department of the mill. When we start production we will have to all intents and purposes a new mill."

The first step taken was the erection of a two-story structure, 51 by 60 feet in dimensions, the lower floor being in the nature of an addition to the manufacturing space, while the second floor will provide a spacious and well appointed office. The present boiler house has also been enlarged by adding 50 feet to the original structure. One 500 horse power Wicks vertical water tube boiler will be installed. The original battery of four 250 horse power boilers has also been overhauled and is in excellent condition.

The board machine of five cylinders and 75 dryers is being enlarged to seven cylinders and 111 dryers, increasing the daily production from 60 to 100 tons, also insuring better quality of production. The increase in the capacity of the machine has made it necessary to install two large Shartle Brothers jordans and two high speed 1,800 pound beaters from the Dayton Beater and Hoist Company. Five old screens have been discarded and seven new screens installed in their stead.

A two cylinder, 12 by 12, Chandler and Taylor variable speed engine is being installed to drive the big board machine, while the three engines already installed in the power plant are being overhauled and rebuilt and equipped with larger cylinders and pistons, insuring a considerable increase in power.

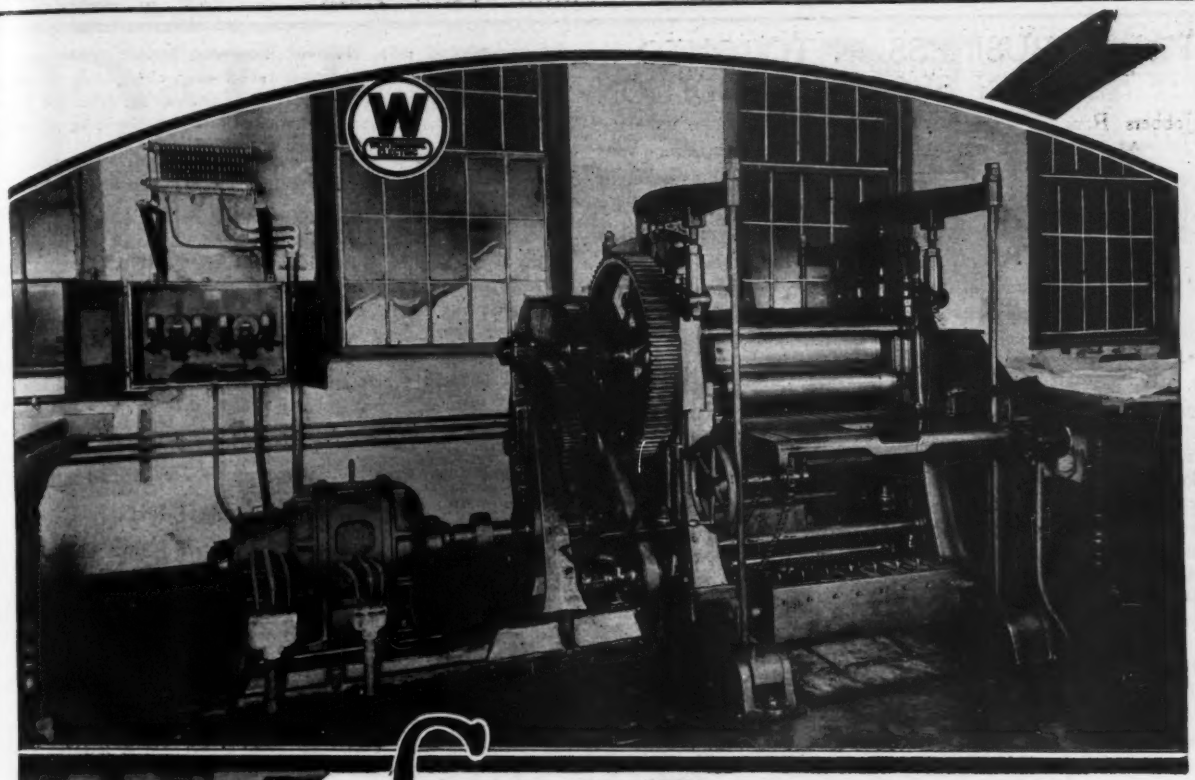
Improved ventilation for the machine room and consequent elimination of steam and dampness will be secured through the installation of 40 Swartout revolving metal ventilators.

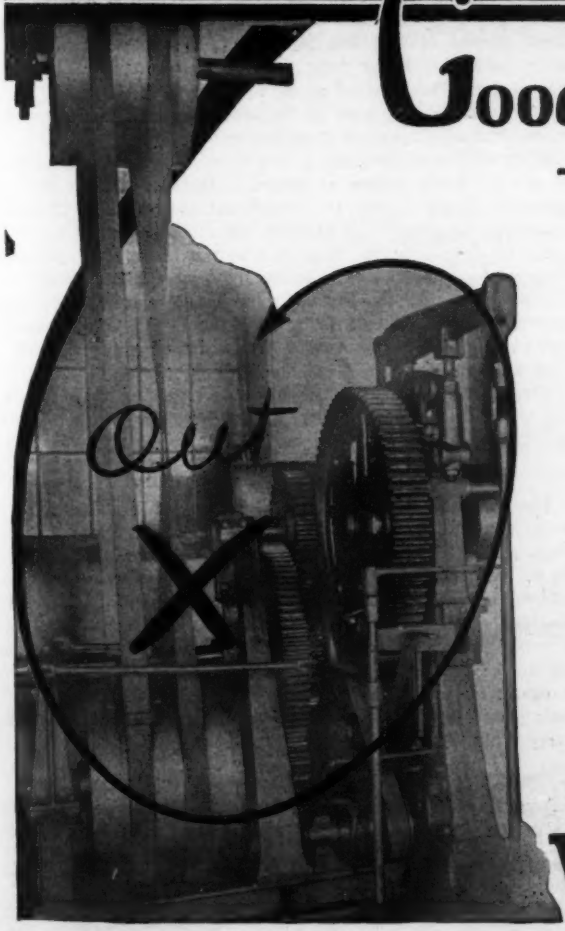
The opening of the renovated mill will result in a large increase in both incoming and outgoing freight.

Felix Pagenstecher Improving

KALAMAZOO, Mich., December 12, 1923.—Felix Pagenstecher, president of the Bryant Paper Company, who has been absent from his desk for the past week, due to a severe attack of neuritis, is showing satisfactory improvement.

EAST VIEW OF WESTERN BOARD AND PAPER COMPANY'S RECONSTRUCTED MILL





Good Engineering
-Increases production

Modern engineering dictates the use of motor drive for paper platers. Snappier operation, increased production, lower maintenance, reduced floor space, better lighting and a better looking mill are effected when the best engineering practice is given a chance.

In one case twenty per cent increased production followed the installation of Westinghouse reversing motor drive which shortens the time for reversals and increases the average speed of the rolls.

Time and energy formerly wasted in belt slippage is saved.

Money that formerly went for labor, repairs and frequent belt maintenance, is saved.

The motors that Westinghouse employs for paper plater drives have the same sturdy mechanical characteristics as those so successfully employed on reversing planers—a service in which only the best of motors can be used.

Westinghouse engineers will gladly explain in detail this improved drive.

Westinghouse Electric & Manufacturing Company
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PAPER BUSINESS IN TORONTO STILL IN SPOTTY CONDITION

Jobbers Report, However, That November Turnover Was Ahead of That for October—Pulpwood Commission to Resume Hearings in Ontario on January 14—Glengarry Pulp and Paper Co. to Improve Plant—Council Takes Action on Fort William Power Situation—Canadian Barking Drum Co. Sells Two Drums to Edward Lloyd, Ltd.—Sudden Stop Put to Export of Christmas Trees.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, December 10, 1923.—Business in the wholesale paper line continues spotty although most of the jobbers report that the turnover in November was ahead of the month of October. Several price reductions have taken place during the past few days in wrapping and kraft paper owing to foreign competition. In the cheaper lines the drop is ¼ cent and on kraft the price receded 1 cent. Just what effect the falling market will have upon demand, it is not possible to say at the present time. The new prices in carload lots to jobbers are,—Rag brown, $4.75; white wrap, $5.25; B. Manila, $5.50; No. 1 Manila, $6.50; fibre, $6.50; Kraft M. F. $7.00; Kraft M. G., $7.15.

To stimulate trade the wholesalers have reduced coated paper by 1 cent a pound on orders ranging from one ton lots up to 5 tons. The mill prices to jobbers have, however, not been changed.

Some specialty lines are moving rapidly in accordance with the holiday trade but general grades do not show much improvement except in isolated instances. Most wholesale concerns are getting ready for stock-taking and naturally are not doing much buying. Until after the inventory period is over, no heavy orders will be placed.

Just what 1924 holds for the trade is problematical but most concerns are looking forward to a year of steady business and steady prices.

Pulpwood Commission Will Soon Resume

The Royal Commission on Pulpwood which held sittings in Toronto a few weeks ago, intend to resume their sessions in Ontario on January 14 and will convene at Port Arthur, North Bay and Sault Ste. Marie, after which a three-day hearing will be held at Cochrane on January 24, 25 and 26. It is expected that a large number of persons will come forward there and give evidence. Settlers and small farmers, who have pulpwood holdings, are anxious to tell the members of the Commission their story and relate some of their experiences in marketing their wood in Ontario.

During the month of March the Commission will sit in the province of Quebec and one session will be held at Edmundston, N. B. It was not convenient for the Commission to visit this place when touring New Brunswick last fall, and, as Edmundston is an important pulp centre, it has been deemed advisable to meet there.

Early in April the Commission will leave for Winnipeg, Edmonton, Regina and other places in the western provinces and from Regina will proceed as far as British Columbia where several weeks will be occupied in visiting the towns.

Glengarry Company Will Improve Plant

A charter was recently granted to the Glengarry Pulp and Paper Company, Limited, with headquarters at Cornwall, Ont. This will be the new name of the Glengarry Pulp Company, of which T. T. Thomson is president and treasurer and C. J. Shephard, secretary. The company hopes to make some changes affecting the efficiency of the plant and to install a drum barker and hydraulic pressing equipment later on. Mr. Thomson, manager of the company, reports that the plant has been in continuous operation for a considerable period and he looks forward to a continuous good demand for groundwood pulp, both for home and foreign accounts. The state of the market at present is rather easy, chiefly due to the improved water conditions in the United States, but with the advent of cold weather, the company anticipates inquiries will be materially stimulated and prices work back to a higher level.

Mill Reorganizes for Safety Work

For the purpose of starting an intensive accident campaign throughout the plant, a meeting of the employees of the Provincial Paper Mills, Limited, was held recently in Thorold. Charles Buss, general superintendent of the company presided and when nominations for chairman were called for, F. M. Cushing was elected to that position. Timely and edifying addresses were delivered by Elmer Tolstead, of Chicago, consulting chief engineer; A. P. Costigane, of Toronto, engineer of the Ontario Pulp and Paper Makers' Safety Association, and John Haliday, master mechanic of the Beaver Wood Fibre Co. At the conclusion the Accident Prevention Committee of the Provincial Paper Mills was reorganized and it is expected that from this our aggressive work will be carried out.

Swedish Visitors Inspect Mills

Carl Svendsen, of Vittingfos Brug Paper Mills, Holmestrand, Norway, and Sig. L. Hanssen, of the Sande Traesliperi groundwood mill, at Sande in Vestfold, Norway, were calling upon the trade in Toronto lately. Both are spending some time in Canada visiting a number of the leading pulp and paper mills in the search for new ideas in manufacture.

Power Question Settled at Last

At last the power situation in Fort William, Ont., has been cleared up and the council has taken action which, it is expected, will relieve matters. The absence of sufficient power was causing great anxiety in pulp and paper circles and resulted in some of these industries closing down for a short time. The city council passed a resolution submitted to it by the Government and Hydro Commission, as approved by its representatives. The resolution embodies four clauses and is as follows:

First—An urgent request to the Hydro Commission of Ontario to use all means within its power to supply power to any company or person within the boundaries of the city. Second, a guarantee by the city of payment for the power supplied, in the event of default by the party to whom it is supplied. Third, an undertaking from the city to secure such rights and privileges within the city as may be necessary to enable to commission to supply power. Fourth, an undertaking from the Hydro Commission that this request shall not be deemed a requisition for power under the contract between the city and the Hydro Commission.

The resolution as passed says nothing regarding the requisitioning of the lines of the Kaministiquia Power Co., except as such a requirement might be implied in the third clause of the resolution.

More Barking Drums Installed

The Canadian Barking Drum Company, of Toronto, have recently sold two barking drums to Edward Lloyd, Limited, of Sittingbourne, Kent, England. The size of the drum is 9 ft. 6 in. by 30 ft. Edward Lloyd, Limited, are erecting a 100-ton groundwood mill, which will be the largest mill of its kind ever constructed in England, and the wood for the operations will be imported from Norway, Sweden and Finland. The drums will be used for rossing the wood. The Canadian Barking Drum Company has also received contracts for one drum each from the St. Maurice Paper Co. for their plant at Cape Madeleine, Three Rivers, Que., and the Glengarry Pulp Co., of Cornwall, Ont.

Stop Export of Christmas Trees

According to advices from Wiarton, Ont., just as the Indians had got started into the cutting of Christmas trees for the United

(*Continued on page* 68)

DU PONT

VAT ACID CHROME BASIC SULFUR DIRECT

DYESTUFFS

A NEW FAST PIGMENT YELLOW FOR PAPER

PONSOL YELLOW GP DOUBLE POWDER

It is suitable for use on all high grade papers whenever extreme fastness to light, acid, alkali and chlorine are essential.

Ponsol Yellow GP Double Powder has been manufactured especially for the paper industry and will fill the needs of those mills producing India tints and buff shades on writing ledger, bond and cover papers.

E. I. DU PONT DE NEMOURS & CO., INC.
WILMINGTON, DELAWARE

STANDARD DU PONT DYESTUFFS UNIFORM

Obituary

James F. Weston

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, December 10, 1923.—James F. Weston for 50 years an employee of what is now the Page Publishing Company, this city, died suddenly a week ago. He was born in Bethel, Vt., August 31, 1858, being the son of James F. and Jane (Puffer) Weston. At the age of 15 he entered the employ of Estes and Lauriat, this city, and remained with the firm through all its changes of name and directorship. The deceased is survived by a sister, Mrs. George A. Gilman of Rochester, N. Y. He was a member of the Booksellers' Association and of the Brotherhood of Commercial Travelers.

Bill for Government Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 12, 1923.—Representative Raker, of California, has introduced a bill in the House "authorizing and directing the Public Printer to provide a pulp and paper mill or mills for the manufacture of print paper for the Government." The bill is identical with the one introduced at the last session of Congress by Mr. Raker. It has been referred to the House Committee on Printing and is as follows:

That the Public Printer is hereby authorized and directed to provide, either by purchase or erection, or both, a pulp and paper mill or mills for the manufacture of print and all other kinds of paper for the Government of the United States, said mill or mills to have a daily capacity of not less than fifty tons of paper; to be located at a place or places in some convenient location or locations in the Pacific Coast States approved by the Joint Committee on Printing, with special reference to utilization of the forests, minerals, water power, and other resources on the public lands.

If the location or locations so selected are on the public lands, the President of the United States is hereby authorized and empowered, in his judgment, to take from the lands of the United States such site or sites and the rights of way thereto as are necessary for the purpose of carrying out this Act. And if the United States owns no suitable site or sites, authority is hereby given to acquire, by purchase, condemnation, or gift, such site or sites and the rights of way thereto as may be necessary.

The Public Printer is further authorized to construct, maintain, and operate, in connection with any site or sites so designated, dams, locks, improvements to navigation, power houses, and power and other plants and equipment necessary or convenient for generation of power and for the production of pulp and other materials required in the manufacture of paper for the Government.

SEC. 2. That for the purpose of manufacturing paper as provided herein the Secretary of the Interior and the Secretary of Agriculture are hereby authorized and directed to sell to the Public Printer at a fair price such available wood, minerals, and other materials on the public lands under their respective jurisdictions as he may require; and the Secretary of Agriculture and the Secretary of Commerce are hereby authorized and directed to render such assistance to the Public Printer as he may request and they may deem necessary to carry out the purposes of this Act in the construction and operation of a suitable plant for the manufacture of pulp and paper for the Government. If sufficient or suitable materials for the manufacture of paper can not be obtained from the public lands, the Public Printer is hereby authorized to purchase such materials in the open market at the lowest and best prices obtainable therefor after due advertisement; and he is hereby directed to give due consideration and encouragement, by experiments or otherwise, in co-operation with the Department of Agriculture, to the manufacture of paper from fibrous plants. Paper manufactured under the supervision of the Public Printer shall conform to such standards and inspection as are provided for in the Printing Act approved January 12, 1895, and amendments thereof.

SEC. 3. That the products of such mill or mills shall be used by the Public Printer for the public printing, binding, and wrapping to the extent that he may deem necessary, and any surplus which he shall determine is not so required shall be sold and disposed of by him at not less than cost, under such regulations as he may prescribe, with the approval of the Joint Committee on Printing, first consideration being given in the sale of such surplus to the needs of other branches of the Government service, which shall procure from the Public Printer at cost all the paper for their respective requirements that he may be able to furnish them.

SEC. 4. That the Public Printer shall keep an accurate and itemized account of the cost per ton of the product of such mill or mills and publish an annual statement of the same, together with a detailed report of the operations, receipts, and disbursements of said mill or mills as soon after July 1 of each year as possible.

SEC. 5. That for the purposes of this Act the sum of $1,000,000 is hereby authorized to be appropriated out of any money in the Treasury of the United States not otherwise appropriated. The expenditures for drafting, technical, expert, and clerical assistance necessary shall be paid from said appropriation, and the Public Printer is hereby authorized and empowered to employ such assistance as in his discretion may be necessary to enable him to carry out the purposes of this Act.

New York Trade Jottings

Norman Wilson, of Hammermill Paper Company, in Erie, Pa., was one of the visitors in the trade this week.

* * *

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, 18 East Forty-first street, left last Tuesday for Washington, D. C., to attend a conference there on standardization of paper.

* * *

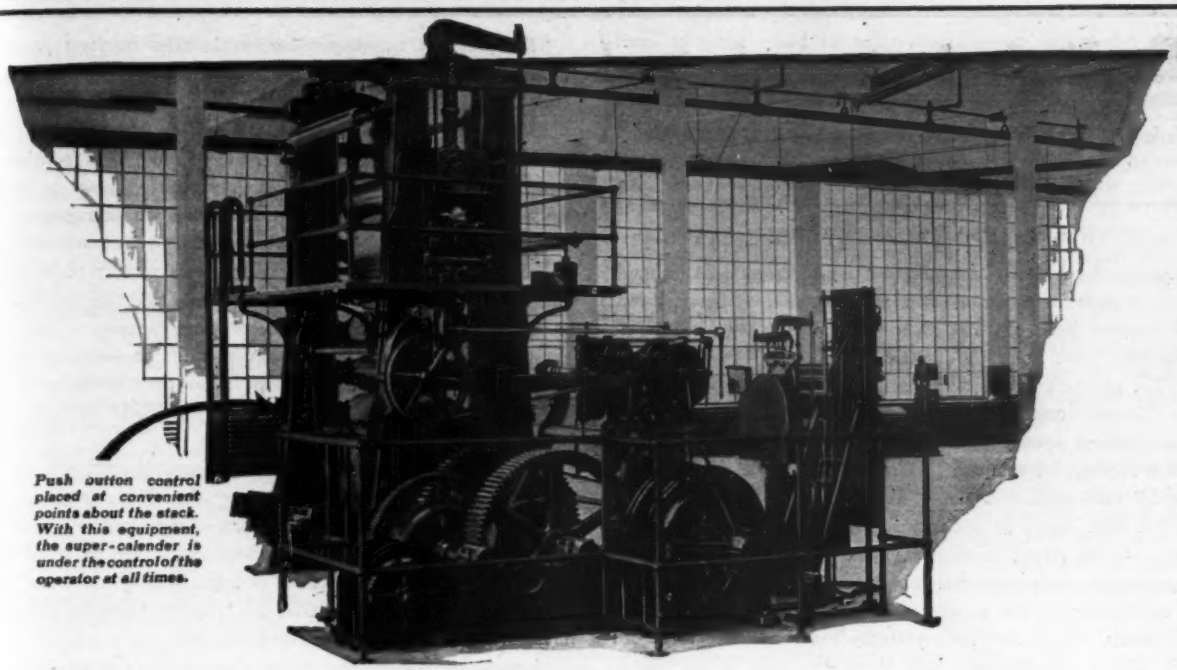
Warren B. Bullock, of the American Paper and Pulp Association, was in New Haven last Saturday. He delivered an address before the New England Chemistry Teachers' Association at Yale University on "New Uses of Paper."

* * *

Karl M. Elish, son of Maurice M. Elish, one of New York's older paper jobbers, has just been appointed associate editor of the New York Times' *Current History Magazine*. Mr. Elish, who was graduated from Harvard in 1917, served two years in France during the war. After a short time spent in the paper business, he joined the staff of International News Service in New York, later being appointed manager of the I. N. S. bureau at St. Louis. During the summer of 1922, Mr. Elish was at Washington for I. N. S., covering the White House and State Departments. In the late Fall of 1922, he was transferred to Berlin, where he remained until last June, reporting the news of Germany and Central Europe by daily cables.

Current Trade Literature

Pulping Paper Stock. F. P. Miller. U. S. pat. 1,455,594, May 15, 1923. Raw paper is first treated in a digester to soften the pulp and paper and the material discharged from the digester is subjected to the action of a jet of water under pressure. The pulp is then allowed to flow with the water through a screen, coarse and fine stock are separated, strings and the like are removed from the coarse portion, and the latter is again mixed with the fine portion. The combined stock is passed over a screen and the fine particles passing through the screen are led to a stuff chest and coarse particles retained by the screen are led to a beating engine, reduced, screened and then also led to a stuff chest.—A. P.-C.



Push button control placed at convenient points about the stack. With this equipment, the super-calender is under the control of the operator at all times.

The Advantages of Two-Motor Drive for Super-Calenders

SEVERAL arrangements of motors for driving super-calenders have been installed by different paper companies, but the two-motor alternating current drive has proved to be most satisfactory because it performs with greater economy and admits of more varied forms of control than does the single motor.

In this equipment the small motor is used for driving the calender at threading speed, and after the paper is threaded through, the large motor is thrown in and automatically brought up to whatever speed the controller is set for, while at the same time the small motor can be shut down —or kept running to operate pump, raise and lower weights, etc.

G-E motor drive permits of constant threading speed between 30 and 50 ft. per minute, very smooth acceleration from threading speed to maximum running speed, and such speed control that the operator may quickly slow down for breaks, weak spots in the paper, or any emergency. It is possible with motor drive to super-calender fine papers at 700 to 750 ft. per minute, or various grades of paper down to one-half of the maximum.

The G-E Two-Motor Drive has been developed with a number of modifications to meet the conditions of different installations. Specialists of the General Electric Company will be pleased to give further detail.

General Electric Company
Schenectady, N. Y.
Sales Offices in all Large Cities

GENERAL ELECTRIC

Editorial

Vol. LXXVII New York, December 13, 1923 No. 24

HENRY J. BERGER, Editor

OUR RAILROADS AND PROSPERITY

Among the factors constituting the basis for continued prosperity none is more fundamental than adequate railroad service, states the current issue of "The Guaranty Survey," published by the Guaranty Trust Company of New York.

"The railroads have attained new levels of efficiency this year," the "Survey" continues. "In recent months they have moved an unprecedented volume of commodities and, instead of embargoes and a shortage of equipment, there has been, even at the peak of the fall movement, a surplus of available cars.

"The high degree of efficiency represented by the prompt movement of this record traffic was made possible by recent heavy expenditures for repairs and for expansion of railway facilities, in anticipation of the growth in the country's transportation requirements. This extraordinary outlay has been made in accordance with a comprehensive plan formulated early in the year by executives of the railway companies who foresaw the large traffic demands of the summer and fall.

"In addition to the progress the railways have made in the fuller utilization of their equipment, they have made significant additions to their facilities. In the first ten months of this year, 155,872 new cars and 3,371 new locomotives were put in service.

"The expenditures represented by this growth in facilities have been burdensome. The additional capital has been raised largely through borrowing, and the credit of the carriers is affected adversely by restrictions which have not permitted adequate earnings. Although the industries in general have been able for two years to show profits not lower than those which usually characterize periods of prosperity, the railroads as a whole have not been able to maintain their earnings at a level equal to the prescribed 'fair' return of 5¾ per cent. on the tentative property value, as determined by the Interstate Commerce Commission.

"Despite the record of increasing efficiency on the one hand, and continuing inadequate earnings on the other, the agitation for reductions in rates persists, especially in rates on farm products. A reduction of freight rates is regarded in some quarters as the readiest means of bringing relief to this or that group of farmers whose products have been for a time relatively depressed in price.

"The demand of the Railway Brotherhoods for 20 per cent increases in wages, or approximately a restoration of the peak scales of 1920, threatens a material increase in operating costs. Thus the earning power of the carriers is endangered from both directions.

"Too little account is taken of the ultimate effects which the proposed rate cuts would have upon the railroad owners, upon other shippers and consumers, and upon the farmers themselves. The question of proper freight rates for farm products involves the whole rate structure. If these rates are to be lowered, producers of other basic commodities, and in turn producers all along the line, will find occasion to demand similar revisions.

"The proposed sweeping reductions in rates on farm products, moreover, would fall most heavily upon the western roads; and their average earnings are already relatively much below those of the eastern and southern roads.

"Inasmuch, therefore, as these roads are not in a position to have their return reduced, the main present purpose should be the preservation of an equitable distribution of aggregate transportation costs, as between commodities and between localities. And if lowering the income of the carriers from farm products is to be offset by increased rates on other commodities, then the farmers as consumers will necessarily have to share the cost of such advances. In any event, the attempt to raise or lower particular freight rates in conformity with the fluctuations in the prices of the commodities directly affected can result only in confusion, and in a rate structure satisfactory to no one.

"The rapid growth of industry in this country continues, and is directly dependent upon railway transportation. The average volume of freight traffic in the last three years, as measured by ton-miles, was more than two and one-third times that of twenty years ago. To make possible a continuation of approximately the same rate of increase in freight movement will require increasing expenditures by the railroads which can be made only out of their earnings.

"The Transportation Act of 1920 marked a distinct advance in promoting the welfare of both the public and the railroads. It continued definite statutory recognition of the principle of a reasonable return upon actual value of the property of the carriers used in the service, and provided administrative machinery for determining the appropriate values. But the law does not guarantee a prescribed rate of return. As protection against possible excessive earnings by the most favorably situated roads, provision was made for the 'recapture' in part of earnings above 6 per cent.

"The railroad companies were not slow to respond to the more definite assurance of fair treatment. With 'abiding faith in the fairness of the American people and reliance on the continuance of the policy announced in the Transportation Act of 1920, as a measure of reasonable protection to investment in railroad property, the companies, at great cost, have brought the railway systems as a whole to new levels of efficiency, the benefits of which are everywhere apparent. And still greater benefits may confidently be expected if an opportunity for the fullest testing of the adequacy of the law is preserved. Executives of companies representing 95 per cent of the Class I mileage have recently announced their intention to continue in 1924 their program of intensive development of facilities.

"To nullify, directly or indirectly, at this time the principle of a fair return on a reasonable valuation, as expressed in the 1920 law, in the face of the generous response of the railroads to its provisions, and before its full effects can be known, would not only be an act of bad faith, but a misdirected effort to remedy conditions whose real causes lie quite outside the field of railway legislation. Serious as is the plight of certain groups of farmers, particularly some of the wheat growers, to strike anew at the railroads because of habit or because they represent a head conveniently exposed, is to ignore the basic reasons for the discomforts experienced by these agriculturists. Such action would aggravate these and a host of other difficulties.

German Paper Conditions

[FROM OUR REGULAR CORRESPONDENT.]

BERLIN, Germany, November 21, 1923.—I will try to give a somewhat specialized review of the German paper market and the general conditions in Germany.

The conditions of Germany became critical, when the government, in consequence of the occupation of the Ruhr, had paid so much paper money for feeding the whole population of about eight million souls in this district, that the value of the paper mark became always less. This was the cause of the fall of the government Cuno, and the new chancellor Stresemann made an end with the resistance against French occupation, so that the government had no more to pay billions and billions for the inhabitants of the Ruhr and Rhein district. But, as the French would not make a compromise and sustained the barriers between the occupied territory and inner Germany, the plans of the new government had heretofore no success. The value of the mark continued to drop and is now already less than one-thousandth part of the value it had when Stresemann became chancellor.

When the farmers began to reject the paper mark as buying medium, it was necessary to create a currency of standard value. But this is impossible as far as Germany does not get a foreign credit. It is to be feared that the trials of the government to give the new currency called Rentenmark the standard gold value will have only a temporary success. A consequence of this evolution was that every manufacturer or merchant in Germany received for his goods this summer a depreciated money. In order to have a sort of insurance against this loss, they raised their prices so that the risk of depreciation was included. But experience proved also that these prices were insufficient, for the depreciation surpassed all expectations. This led to so high prices of all commodities that the working class had to receive very high wages, which contributed to bring most of the German goods to prices reaching the world level. When the mark dropped still lower, the farmers declined to give food-stuffs for paper mark, and this caused the government to hasten the introduction of a stable currency. After long deliberations a new bank was established, which was granted the right to give out paper money called Rentenmark. The foundation of this bank is, that all landed property, buildings, industries and commercial establishments have to lend the bank a part of their value. This new money does not yet circulate; but in the meantime the gold-loans of the German Empire are used as buying medium. All prices are now gold-prices.

The paper makers already began in August to ask gold prices as they had to pay for the coal, pulp and wood, as far as it was of foreign origin, in gold. By the above mentioned circumstances the prices of paper became so high that the home customers could not well afford to pay them.

The average German has now scarcely money enough to buy the most necessary food, and therefore newspapers and books find very little sale, and many smaller stores have ceased to use fresh wrapping paper and use now old newspapers. That the printers and paper transformers had little to do, is a consequence of this state of things, and the paper mills are only so far busy, as they have export orders.

When the cabinet of Stresemann began to work, they fulfilled the wish of the trade to abolish the export-taxes. The export-tax on paper was already two months before reduced from 7 to 2 per cent and in the beginning of September the last remainder of the export-tax ceased. At the same time the export committees, which fixed the export prices, have been liquidated. But it would be an error to believe that now every mill is free to make its own prices, for the conventions of the makers of the different papers remained working, and they continue to fix the home and export prices as before. Nevertheless as the official export committees do no more exist with all their employees, controllers, etc., the main pillar of the conventions exists no more, and therefore the mills are much freer to bargain and to make concessions especially for export orders, for everybody in Germany is anxious to get foreign money. The bad state of the home market has its part to this state of affairs. The outlook in the future of the paper business is only favorable to the exporting interests, as the big mills with their hundreds of working people will do everything in their power to hold their machines running, and this will be possible only for exporting orders.

As soon as Germany has something like a stable currency, even for a short time, the prices probably will go down, as the risk of the depreciation of the money will have ceased, and as well as Germany has been a paper exporting country before the war, it will continue to be so.

It is also to be considered that nobody in Germany is now living in as good conditions as he was accustomed to before, and therefore probably work in Germany will be cheaper than in wealthier countries.

The export prices have remained about the same as they were in spring, and they have only partly been raised 5 or 10 per cent. The home prices in Gold have been raised twice; now they are about 50 per cent over the pre-war level. It is probable that the home prices will be raised again in the next week by from 10 to 20 per cent as the costs of the mills become higher on account of the expenses having to be paid in gold marks, especially taxes, postal and railway rates, and partly the wages.

The whole industry in Germany works with great restrictions, as the home customers can no more afford to buy even the necessary food and clothing. Therefore the establishments can mainly work as far as they have export orders.

The mark has lost almost entirely its buying power in Germany. Therefore chaotic conditions prevail in business of every sort. The trade conditions ask f. i. payment in gold-marks. As such money does not exist, the debtor sends paper mark at the exchange figure of the gold-mark, but before this gold-mark reaches its address, it is almost depreciated, so that the profit of the seller changes into loss. A transient betterment can only be expected as soon as the new stable currency Rentenmark will be in circulation, whose value has to be equal to one gold-mark. It will come in circulation in the beginning of December.

Prompt Action is Promised

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 10, 1923.—It is understood that the Federal Trade Commission will take prompt action in connection with its case in Docket No. 934 against the Pacific States Paper Trade Association and others.

A final arugument was held in this case before the Commission a short time ago. Since that time Commissioner Van Fleet has been given the case to consider testimony and he will report back to the Commission within a few days. It is understood that if the Commission's decision is not satisfactory to the paper men that the case will be appealed to the United States Circuit Court for the 9th Circuit.

Standard Fiber Samples

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 12, 1923.—It is understood that the Paper Laboratory of the Bureau of Standards has completed the study of the manner of preserving standard fiber samples, used for reference in estimating the fiber composition of paper.

An investigation is being made for the purpose of developing a suitable method of differentiating between soda pulp and sulphite pulp fibers by the Laboratory. This problem is of much importance as mixtures of these pulps occur in a great variety of papers and while several methods of estimating the correct proportion of the fibers have been published, officials say that none are entirely satisfactory.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G.MacNAUGHTON, Secretary

HINTS ON SEWING THE WIRE*

By S. E. Austin, Laurentide Paper Mill Foreman

The "wire" on a paper machine is an endless wire cloth made of specially drawn copper, brass or bronze wire. The wire from which the web is made is finely drawn and the web when woven contains usually from 60 to 75 strands to the inch in the direction of the wire's width and 40 in the direction of the length of the wire.

Figure 1

Figure 2

The purpose of the wire is to carry the papermaking fibres while they are being intermingled to form the web of the sheet of paper. The requirements are that the fibres be kept on top of the wire and that the water in which they are held in suspension be allowed to drain off through the meshes of the wire fabric. For different kinds of paper made under differing conditions the specifications for the wire cloth are varied. The procedure in sewing the wire is the same for all kinds of fourdrinier wires.

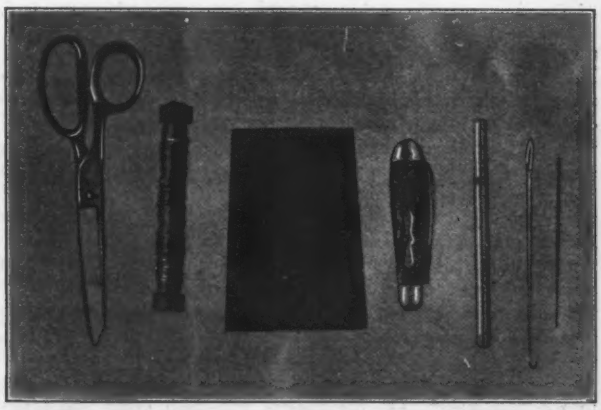
The purpose of sewing the wire is to prolong the life of individual wires in order to increase the number of tons of paper made from each, and so reduce to a minimum the part of the cost of paper due to wires. The life of wires varies considerably since paper machines operate under widely varying conditions. Quality of the material in the wire itself, speed of operation, condition of the fresh water used for showers, amount of suction on the flat suction boxes, fourdrinier design and the kind of fibre used in making the paper are some of the more important factors in the life of fourdrinier wires. The latest types of high speed newsprint fourdriniers will run with the same wire for over twenty days. On slower machines wires sometimes last one and two months.

Figure 1 is a sketch of a small piece of the wire as it would look if it were cut between two of the lengthwise or warp wires and across the crosswise or filler wires. It will be seen that the lengthwise wires, in addition to taking the strain of dragging the wire around as it runs by the little kink that is put in them in weaving, get the wear from whatever they may touch as they travel.

Figure 2 shows an exaggerated wear on these warp wires. They were on the side that touches the suction box.

When Component Wires Wear Out

Sooner or later in the life of the wire fabric the component wires running lengthwise of the wire wear out. The accompanying illustration shows the reason why the crack in the wire is usually crosswise of the wire rather than lengthwise. The warp or the lengthwise threads touch the rolls over which the wire runs, protecting the woof or crosswise threads from wear. The lengthwise threads take all the strain from the driving of the table rolls and the breast and carrying rolls by means of the wire. The lengthwise threads therefore become worn through first and the crack appears. A crack in the wire means breaks on the machine sooner or later. A short crack will often run over the machine for hours without causing trouble although it may show up in the sheet. Then the standard of quality demanded of the class of paper being made



A set of tools that has served a papermaker for several years

determines whether the wire shall be sewed. As soon as two or three breaks at the wet end have occurred from a crack in the wire the machine is shut down and the stock shut off the wire to enable the boss machine tender or the machine tender to sew the wire. It is the custom on shut-downs during the operating period, when the stock is shut off the wire, to examine the wire and sew any crack

*Reprinted from The Journal, Grand Mere, Que.

that may be apparent because it is only a matter of time when that crack will become troublesome.

A complete kit of tools and accessories for sewing the wire well and quickly are shown in the accompanying illustration. This kit is one actually used by a boss machine tender and is the accumulation of years. While some of the tools can now be purchased better than it is possible to make them the true papermaker is constantly on the lookout to find a little accessory or tool that will aid him in his work.

The list of equipment includes:

Hook, the most important tool for sewing the wire. A good one is illustrated.

Scissors, preferably shaped like the nose of a chisel at the point.

Scraper, a carpenter's scraper, about 3 inches by 6 inches.

Hammer, a piece of metal about the size of a pocket clasp knife

THE FIRST STITCH. PUSHING THE LONG STRAIGHT END OF THE WIRE DOWN THROUGH THE MESH OF THE WIRE FABRIC. THE OTHER END OF THE SEWING WIRE IS CONTROLLED BY THE OTHER HAND SO THAT THE WIRE WILL NOT KINK

with a good flat surface about ½ inch wide to hammer the wire with. This makes the sewing flat and keeps the wires from running back through the mesh.

Pincers, a very small pair.

Electric light, an extension long enough to reach the full width of the fourdrinier from the nearest socket. Should have a guard.

Sewing the Wire

The wire is sewn with wire a little finer than that used to make the wire fabric but preferably of better quality. The strain on the sewing is quite unusual and more severe than on the original wire and therefore a high quality of wire thread is needed. A spool of sewing wire is usually included in the box containing each wire as it comes ready for use. Sometimes this wire is suited to the purpose and occasionally it is not. To test the wire take a known length of wire between the two hands, grasping the wire firmly with each thumb and finger. Hold one thumb and finger on a mark and note the distance to which the piece can be stretched by the other hand before the wire breaks. That which stretches the greatest distance is usually the most satisfactory sewing wire.

When the wire is stopped to allow the crack to be sewn the crack should be stopped at some point where it is readily accessible to the papermaker. On fourdriniers with both upper and lower couch rolls it is usually necessary to stop the crack between two of the table rolls at a point where a board may be placed from one frame to the other. As the sewer's position on the board is constricted a wad of paper broke helps to relieve the strain of the position. On a fourdrinier with only one couch roll the crack may be sewn near the couch roll. A small wad of broke is desirable here in order that the papermaker may not press the wire into the holes in the couch roll. It will be less strain on the papermaker's eyes if he lays the light of his extension on the wire close to the crack and shades his eyes from the rays with a piece of paper laid over the light. For the best service the light should be to the left of the crack.

In lying on a board to sew the wire one arm will be slightly restricted and it depends on whether the papermaker is right or left handed whether he lies on his right arm or his left. The arm that is used more should be freer, and most people will sew better lying on the left side with the right arm free. Sewing the wire on a machine with a suction couch the papermaker is not hampered in any way and it would be well to acquire an ambidextrous style in sewing which will eliminate some of the lost motion. Only experience will give the papermaker an idea of how much of the sewing wire to take to repair any given crack. A long crack should be sewn with several short lengths of wire rather than one long one as drawing the sewing wire through the meshes of the wire thins it and weakens it. Long pieces of wire kink too easily.

Two Methods of Sewing

Two methods are employed in sewing the wire: One to sew from one end of the crack to the other, employing a very fine shanked hook to finish sewing in the small space left at the end; the other is to sew from one end to the middle and then from the other end to the middle. The advantage of the first method is that the work goes faster from left to right and also in one direction only. The advantage claimed for the second method is that it allows more opportunity to secure the ends of the crack, a most important point in sewing the wire, for if the ends are not well secured the crack will spread beyond the sewing.

In putting in the actual stitches the end of the sewing wire is pushed through the mesh of the wire about three threads in the woof or cross wires above the crack. In sewing with the right hand this is done with the right hand and the hook is held in the right hand. About two inches of wire are pushed through and then the end is hooked out through the crack itself. In the first stitch enough wire is pulled through to complete the sewing or part of the sewing that is to be done with that strand of wire. Only pull through as much wire as can be handled without the wire kinking,

HOOKING THE LEADING END OF THE WIRE BACK THROUGH THE CRACK. NOTE THAT THE WIRE IS LOOPED AROUND THE FINGERS OF THE RIGHT HAND SO THAT IT CANNOT KINK. NEVER LAY DOWN THE HOOK. KEEP IT IN THE PALM OF YOUR HAND, IT SAVES TIME

perhaps eleven or twelve inches. It is customary to leave enough wire to finish the sewing projecting beyond the first stitch until the sewing is completed.

As the end of the wire is hooked through the crack it is caught by the right hand while the slack of the wire is handled by the left until the slack is pulled down tight. No kinks can be allowed to form in the sewing wire as it will snap at once at the kink. In

hooking the wire through the crack the end of the wire should be bent as little as possible as the first inch or two of the sewing wire forms the needle which leads the wire through the mesh each time and if this inch or two is bent it must be straightened before the next stitch is taken, which involves lost motion. This needle end is a trifle smaller than the rest of the wire because the wire taken to sew with is broken from the rest of the spool and is drawn down slightly finer in breaking.

An Important Step

One of the important knacks in sewing the wire is pulling the stitches tight at the moment when the left hand lets go of the slack

DRAWING THE STITCH DOWN. THIS MUST BE DONE WITH A FIRM STEADY PULL WITH EXTRA TENSION AT THE END TO SET THE STITCH. THIS TENSION MUST NOT BE SO GREAT AS TO SNAP THE WIRE. NEVER USE THE THUMB OR FINGER NAIL TO PRESS DOWN THE STITCH—IT MAKES A SLACK SEWING

and the sewing wire is pulled down close to the fabric. In sewing towards himself the papermaker gives this last stitch with his left hand and in sewing away from himself he uses the right hand. It is important that each stitch be pulled tight and at the same time

GOING ON TO ANOTHER STITCH. NOTE THE LOOP OF THE WIRE AROUND THE SEWER'S HAND TO PREVENT KINKING. THE LEADING END OF THE WIRE MUST BE KEPT STRAIGHT TO ACT AS A NEEDLE

the pull must not be so hard as to snap the sewing wire. Expertness must be acquired by experience.

In general the motion is carried on by the right hand and the right hand hooks the wire back through the crack and cares for the slack at all times. The accompanying illustrations show the hands in position to push the wire through the mesh and hook it back and also in position when the right hand is drawing the wire through the mesh with the left hand holding the slack.

In sewing the wire a stitch should be taken at every second or every third wire in the warp or lengthwise threads. The principle is to bring the edges of the crack as nearly as possible into their normal positions and yet not have a bulky sewing, in other words to have the sewing simulate the original fabrics as nearly as possible. If the sewing is so close that the water will not drain through the sewed place as it does elsewhere the spot in the paper will be so wet when it leaves the wire that a crack will form in the paper just as if there was an unsewn crack in the wire.

Unusual problems in sewing the wire occur when irregular cracks or round holes come in the wire. A slight dinge in the wire, especially from the outside of the wire to the inside, will soon wear out on the suction boxes and present a round hole to be sewn. If this hole is only a few strands of the crosswise wires long, it can be sewn with the ordinary stitches extending from one side to the other. If, however, the hole is a half or three-quarters of an inch long the ordinary stitches replacing the lengthwise wires must be supported by one or two stitches to replace the crosswise wires. If no such support is given the long stitches will sag, allowing the paper to become extra thick and so wetter in the spot sewn. This wet spot will often be picked out of the sheet in passing over the machine and be worse than the original hole. In repairing a large hole in the wire, care must be taken not to make too thick a sewing as the spot will not drain properly and the bad wet spot is formed.

Examining the Wire

In examining the wire before sewing, the hook should be inserted in the crack and the apparent end of the crack tested to discover additional wires that are just worn through but which have not separated enough to be apparent to the eye. A crack in the wire is frequently several strands of wire longer at each end than is seen in the sheet of paper or is apparent to the eye when the wire is being examined.

Quickness in sewing the wire is highly desirable and will come with practice, but the important point in sewing the wire is to make a sewing that will run over the machine and last as long as does the rest of the wire. A crack well sewn the first time rarely needs to be sewn again before the rest of the wire is old enough to come off. The cases when the wire must be sewn again occur chiefly when a flaw in the wire cracks out after only a few days' run and the sewing threads become worn after many days of wear. The wire well sewn is no more trouble than a new wire and a poorly sewn wire continues to give trouble until the job is repaired.

In starting a sewing the wire goes through the mesh on the side of the crack nearest the couch roll and an end is left. In finishing the sewing the end is pulled tight and cut off about one-sixteenth of an inch from the wire and bent over the breast roll. The little hook formed in this way secures the sewing at the end. The other end of the sewing is finished by bringing the thread through the crack the last time from the breast roll side of the crack and hooking the end over toward the breast roll.

Find Coal Rate Unreasonable

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 12, 1923.—The Interstate Commerce Commission has handed down a decision in case No. 13,472 of the United Paper Board Company, Inc., against the Greenwich and Johnsonville R. R. Company and others. In their syllabus the Commission says:

"Rate on Birds-eye coal from Group A., B., and C mines in Pennsylvania to Thompson, New York, found unreasonable. Reparation awarded."

The Seymour Company of 323-329 West 16th street is announcing to the trade that it is now carrying at its warehouse a complete assortment of popular items of blotting paper for advertising and desk purposes.

DEVELOPMENTS IN SULPHITE AND SULPHATE PRACTICE IN THE PULP MILL*

Direct Cooling of SO_2 Gases in Acid Making—Recovery of SO_2 From Blow—Using Sulphur in Sulphate Makeup—Super Bleaching.

To manufacture sulphite pulp at least 200 lb. of sulphur is required per ton of pulp produced. In many mills this amount runs up to 350 lb. per ton. To improve the efficiency of this process George A. Richter and Gordon E. Wightman have recently developed new cooling and waste gas recovery apparatus (U. S. Pats. 1,469,958-9, Oct. 9, 1923) assigned to the Brown Company, Berlin, N. H.

The cooling apparatus departs from usual practice by carrying out the operation by direct instead of indirect contact of the hot SO_2 gases from the burner with cold water. The cooling tower is filled with tile, spiral brick, etc. The spray of water is so regulated that the liquid leaving the bottom of the tower has a temperature of 130 to 190 deg. F. and so when saturated carries from 0.2 to 0.7 per cent sulphur dioxide. To remove this gas as far as possible, about 10 per cent of the tail gas (unabsorbed after passage through the usual lime-filled absorption towers) is run through a recovery tank into which the hot liquor from the cooling tower flows. This tail gas is strengthened in this way up to as high as 8 per cent SO_2 content. Since this is the approximate strength of the gas as it passes from the first absorption tower to the second, it is led back into the system there. The SO_2 content of the tail liquor is reduced by this means to from 0.02 to 0.10 per cent. Several claims of improvement in operation are made, chiefly based on added cooling efficiency. Elimination of sulphur and sulphuric acid, both objectionable, is also pointed out. Greater flexibility of operation without sulphur loss thus results, according to the assertions made.

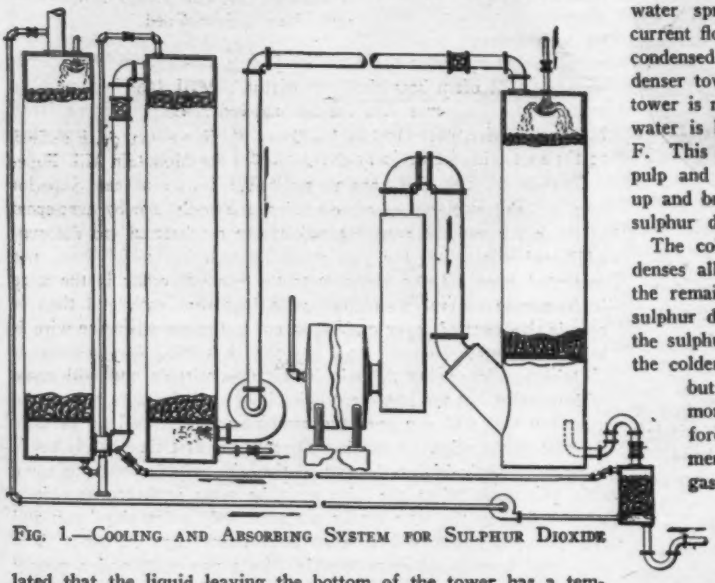


FIG. 1.—COOLING AND ABSORBING SYSTEM FOR SULPHUR DIOXIDE

Recovery of SO_2 in Blow

Attempts have been made in the past to recover the sulphur dioxide in the gases coming from the digester when blown—that is, when the pulp is discharged under pressure. Most of these proposed methods have been found impractical due to the expense and complexity of the equipment required. In the present patent, an arrangement indicated in Fig. 2 is provided.

The gases coming from the blowpit are led into the foot of a wooden condensing tower, which is filled with spiral brick or similar material. Water is sprayed under pressure down through this tower. A trapped drain pipe carries this water away. The cooled gases, consisting of N_2, O_2 and SO_2, are conducted from the tower, in which condensable vapors have been removed, to the base of an absorption tower. The SO_2 may be taken out by simple scrubbing with water, by lime-stone and water or in some other system.

In operation, the blowpit is flushed with steam just previous to the blow to remove SO_2 as far as possible. Vacuum is set up in the system by a pump working on the condensing tower and the water sprays in that tower are started. During the countercurrent flow of the water and the gases and vapors, the vapors are condensed by the water. The flow of water through the condenser tower is carefully controlled so that outgoing gas from the tower is maintained preferably below 100 deg. F., and the outgoing water is kept above 180 deg. F., preferably from 190 to 200 deg. F. This stream of water is delivered into contact with the jet of pulp and liquor issuing from the blow and is thoroughly broken up and brought to the boiling point, so that any small amounts of sulphur dioxide gas contained therein are immediately liberated.

The cold water entering the top of the tower effectively condenses all vapors passing upwardly through the tower and cools the remaining gases to a relatively low temperature so that the sulphur dioxide is ready for absorption as calcium bisulphite. As the sulphur dioxide gas from the blow pit comes into contact with the colder water entering the tower, a small amount is absorbed, but as the temperature of the water is gradually increased, more and more of the gas is liberated, until finally, just before the water is raised to the boiling point by its impingement upon the jet of pulp and liquor and all traces of the gas are removed, the water contains about 0.2 to 0.3 per cent sulphur dioxide. The water delivered from the tower, being cooler than the stream of pulp and liquor, not only loses its contained gas but also condenses some of the vapor in the blow pit, thus causing the blow pit to act practically as a part of the condenser system.

Substituting Sulphur for Salt Cake in Sulphate System

In the sulphate process of cooking wood a solution of sodium hydroxide and sodium sulphide is employed. After this cooking solution has reacted with the wood a gummy liquor results called "black liquor." Since the existence of this process on a commercial basis depends upon the recovery of the soda, this black liquor is evaporated and in the usual practice a makeup of sodium sulphate

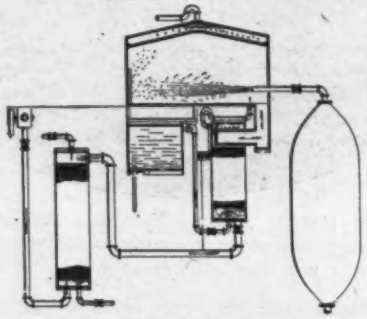


FIG. 2—WASTE GAS RECOVERY

*From Chemical and Metallurgical Engineering.

is added. The mixture is then smelted, dissolved in water, any necessary addition of sodium carbonate made, causticized with lime, filtered and then run back into the system.

George Richter and Douglas H. McMurtrie in patent 1,489,960, Oct. 9, 1923, assigned to the Brown Company, Berlin, N. H., point out that instead of maintaining the necessary high sulphide concentration by a salt cake (Na_2SO_4) makeup, sulphur may be used instead. If desired, sulphur and carbonate (Na_2CO_3) may replace Na_2SO_4) altogether. It is claimed that this makes possible a desirable increase of total sulphur to total sodium content of the liquor. Since carbonate may be added either just before smelting or just previous to causticizing, it is possible to control

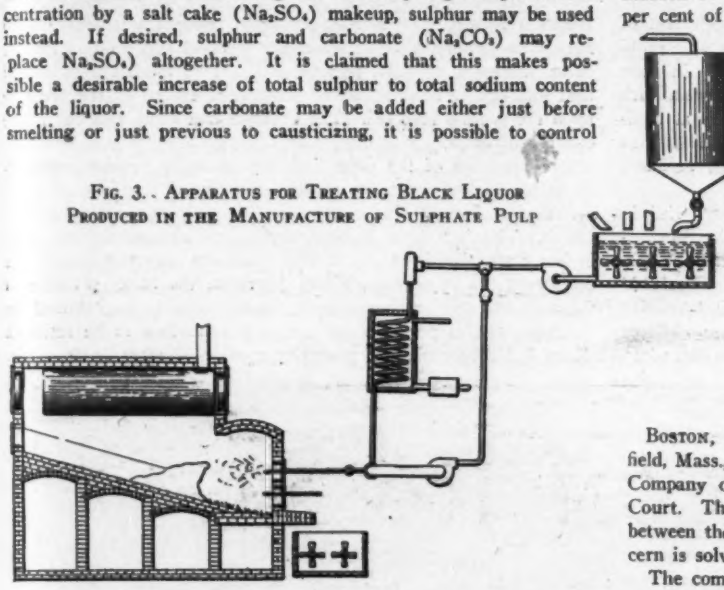


FIG. 3. - APPARATUS FOR TREATING BLACK LIQUOR PRODUCED IN THE MANUFACTURE OF SULPHATE PULP

the composition of the resulting liquor very carefully by this method.

Apparatus for carrying out the procedure outlined is shown in Fig. 3. The components S, Na_2SO_4, and Na_2CO_3 are added to the vat in which the concentrated black liquor is run. The mixture is pumped from this tank, into a heated coil, where the mixture is "exploded." From this coil the mixture is forced into the upper part of a combustion chamber in which an oxidizing atmosphere is maintained.

Here S burns to SO_2, which combines with carbonate to form Na_2SO_3. A reducing atmosphere of carbon monoxide is created in the lower portion of this combustion chamber. The molten soda flows downward on the sloping floor and so into the vats where it is dissolved. The causticizing and filtering are carried out as usual.

Increasing Whiteness of Bleached Stock

The problem of obtaining very white pulp is involved, in that the elimination of the last of the yellow color usually involves an undesirable change in the composition of the cellulose. To obviate this change but at the same time to obtain an increased degree of "whiteness" George Richter and Elwood Ebie in patent 1,470,556, Oct. 9, 1923, assigned to the Brown Co., Berlin, N. H., have outlined a method of "super" bleaching, to be applied particularly to previously bleached sulphite stock.

A stock, bleached to a point where it shows a color number of 95 to 99, tests high in strength, has a relatively low coefficient of shrinkage in drying, a high percentage of alpha cellulose and relatively low percentages of beta and gamma cellulose, assuming, of course, that the stock has not been injured in the initial liberation of the fiber by the process of digestion. By treating such a stock with a small quantity of chlorine under proper temperature conditions and for a limited period of time, the stock may be superbleached and whitened to a point where it shows practically no traces of color with practically no diminution in strength and with but slight variations in the relative proportions of the alpha, beta and gamma cellulose.

The pulp is first bleached in the usual manner with calcium hypochlorite solution carrying around 32 grams available Cl_2 per liter. After the action is complete and the pulp has been washed anti-chlor is added, when necessary, to remove the last traces of the chlorine. The second stage or super-bleaching is usually carried out by a solution of Cl_2 in water, an amount equivalent to from 0.2 to 0.5 per cent of the air dried stock being used. Bisulphite solution is then added to the pulp in sufficient quantities to neutralize any resulting hydrochloric acid and to combine with any remaining traces of chlorine. The bisulphite may be added either in the form of sodium or calcium and usually contains an excess of free sulphurous acid. The stock, of course, is agitated, and, after the addition of the bisulphite, sufficient time is allowed to elapse for effecting a complete mixture, and the stock is then thoroughly washed with clean water and is ready for screening, riffling and other subsequent operations. A result much superior to that obtained by direct bleaching with chlorine is claimed.

Receiver for Mountain Mill Co.

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, December 10, 1923.—Louis T. Stevenson of Pittsfield, field, Mass., has been appointed received of the Mountain Mill Paper Company of East Lee, Mass., by Judge Burns of the Superior Court. The receivership is said to be a friendly one by agreement between the mill company and its creditors. Counsel say the concern is solvent.

The company is said to be indebted to Stevenson and others on notes totaling $200,000 and likewise to the Lee National Bank for $12,500 and $49,500 to creditors on open accounts. The mill company's assets consist of real estate, machinery, etc., valued at $300,000; accounts receivable, $800,000 and stock and raw material, $20,000.

Bryant Co. to Play Santa Claus

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., December 12, 1923.—Two monster Christmas parties, designed to bring happiness to 3,000 people, will be staged in Bryant Paper Company's beautiful assembly hall, Friday and Saturday evening, December 21 and 22. These events will be the joint efforts of officials of the Bryant Paper Company and the members of the Human Relationship Association.

There will be a Christmas tree in a delightful Christmas setting and backing suited to the yuletide season. Santa Claus will be present and the company will see to it that the tree is well stocked with candy, nuts and sweets for the kiddies.

Miss Henrietta VanderWerken and William Brady are the committee in charge of the program.

Favor Tax Reduction

A referendum taken by the American Paper and Pulp Association on Secretary Mellon's proposal for tax reduction has resulted in over 95 per cent of those replying voting in favor of the Mellon proposal, and against a bonus for able-bodied veterans. This questionnaire was sent out so that the Association might be able to speak with authority as to the attitude of the paper industry on the tax program. The referendum provided that the federal government in the opinion of the industry, should do all within reason for the care of the sick and wounded veterans. The first two questions were answered almost unanimously against the bonus, and for the tax proposal. Questions as to specific proposals of Secretary Mellon, varied only slightly from the replies to the general proposal.

TECHNICAL SECTION, PAGE 222

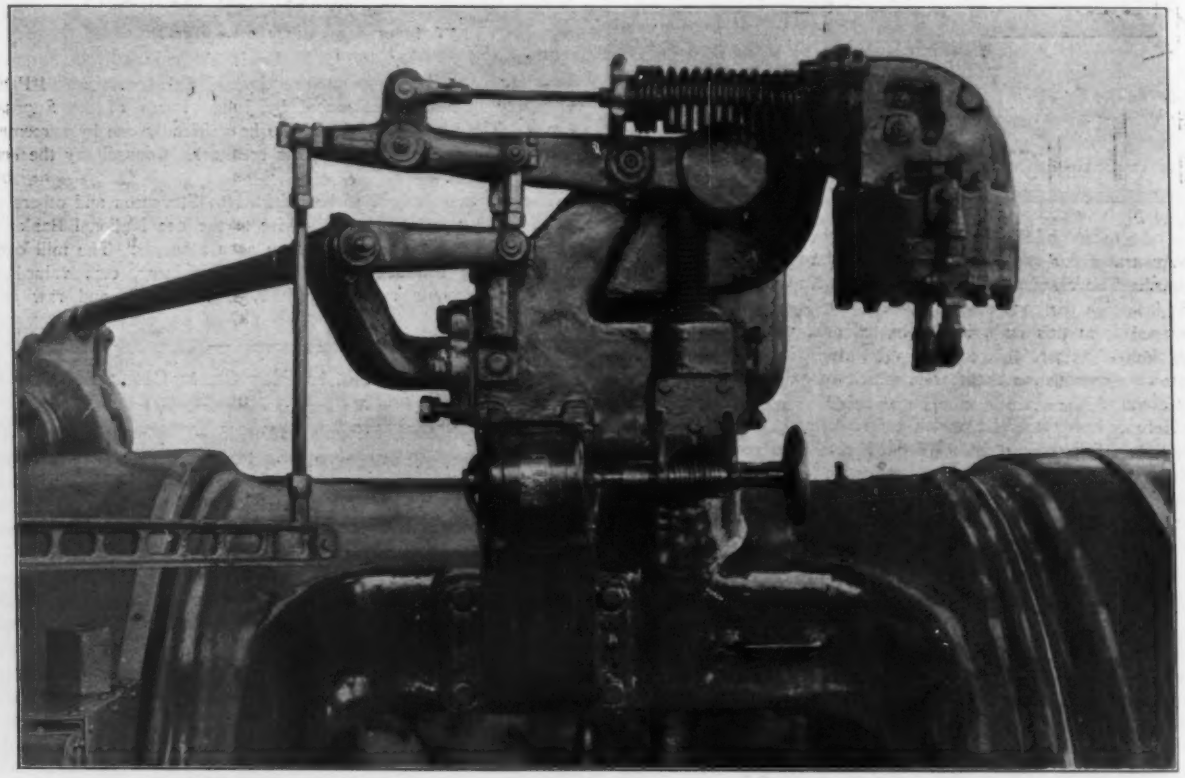
STEAM TURBINE APPLICATION IN PULP AND PAPER MILLS*

By A. G. Darling, General Electric Company

The particular phase of interest today is in the application of steam turbo-generators to your mills. Each mill has its own problems varying widely from other mills in many cases while in some the conditions are the same but the results desired differ from each other. What has been done to obtain maximum economy at minimum cost is probably of greater interest as general statements than the review of particular cases. With general principles in mind, specific instances can more readily be solved.

Steam is the most useful form of heat that has been tried in paper mills. Its peculiar characteristics deserve attention, for instance, it takes one heat unit to raise a pound of water 1° F. It takes 0.3 of a unit to raise a pound of steam from 212° F. to 213° F. at about atmospheric pressure. On the other hand it takes 972 units at atmospheric pressure to change water into steam while at 3,200 lb. pressure or 706° F. any additional heat changes water into steam. This point is called the critical pressure. Conversely in changing steam back to water near atmospheric pressure a large amount of heat is made available and is used in a great many processes which require large amounts of heat to complete them. However, if condensation does not take place in the processes but only steam or water gives up its heat, the amount of steam or water must be enormously increased. On this point drying systems of paper machines prove successful or fail. Condensation can be used in a process but not in a steam engine, therefore, the dividing point in the use of hot water or steam determines the application of the energy released. For certain processes, temperatures higher than that of the boiling point of water are required necessitating the use of an increased pressure, because it is not so much the additional heat that can be released as the penetration caused by the pressure upon the process involved. The example that bears this out is the cooking of chips.

The processes of the paper industry generally require pressures of relatively low order, for example: heating of buildings, 5 to 10 lb.; drying, 5 to 20 lb.; evaporating, 20 to 50 lb.; cooking, 60 to 120 lb. The first three, heating, drying and evaporating are about in one class, that is to say if they were the only pressures to be considered the upper limit would determine the boiler pressure of the mill and the other pressures would probably be obtained by throttling but as they are not the only conditions to be satisfied, steam for evaporation is generally considered separate from the heating of buildings and the drying of paper. When large quantities of steam are involved for the various processes the reasons for separating the sources of pressure become even more distinct.



Control Mechanism for Extraction Valve Gear. Connection to Governor at Left

Steam for Cooking

Steam for cooking is a feature by itself and so far has been obtained almost entirely direct from the boilers or by throttling the boiler pressure. Based on information obtained from various paper chemists, it is understood that a maximum total temperature must not be exceeded and further that high pressures raise the cost of digesters beyond economical limits, therefore, it is quite clear that if cooking steam is obtained direct from the boilers or

*Presented before Northern New York Division of the Superintendents' Association, Carthage, N. Y.

throttled, the total heat, and, therefore, the pressure and temperature of the boiler steam is immediately determined by the total heat permissible in the digester.

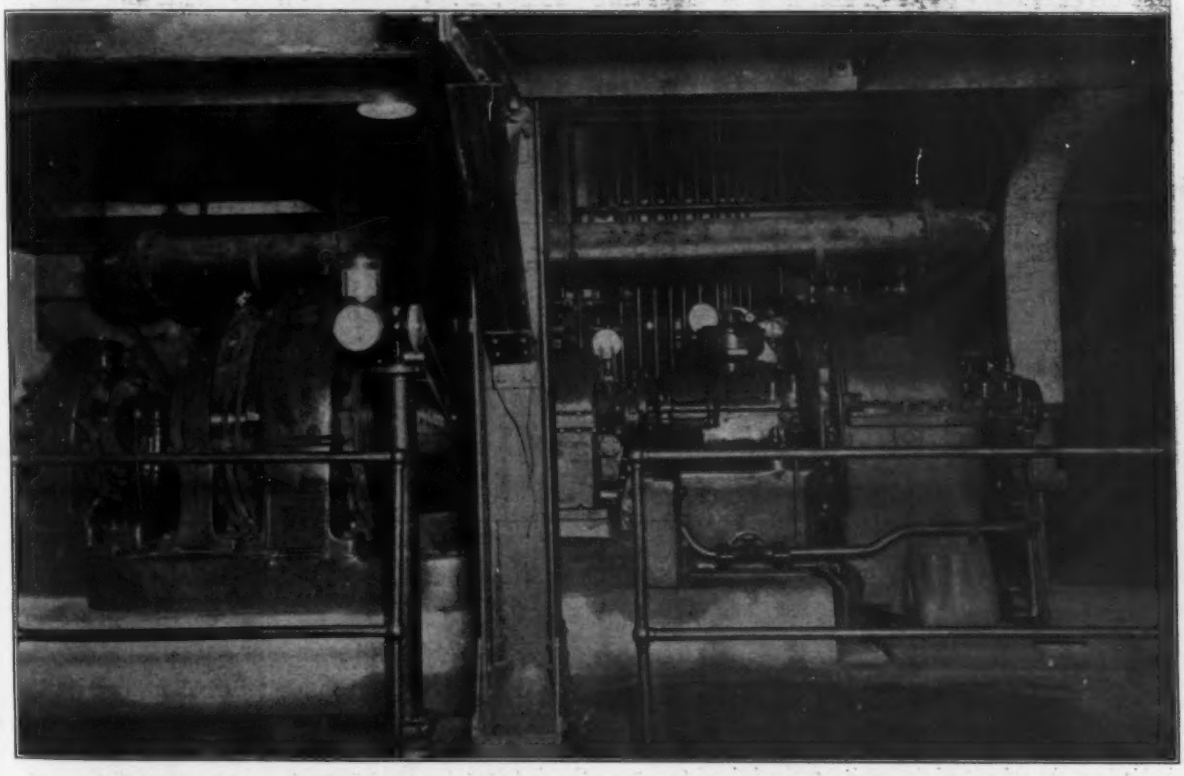
Certain elements enter into the cost of generating steam. They are the cost of equipment such as boilers, grates, steam piping, housing, etc., as initial investments to which must be added insurance, taxes and depreciation and again the cost of maintenance and operation including labor and fuel. Fortunately the cost of steam does not directly depend upon its pressure, that is to say, it is not much more expensive to obtain higher pressures than moderate pressures. For the higher pressures the additional initial investment is only a fraction of the investment for low pressure, therefore, the fixed charges are not materially increased when higher pressures are considered. The item that is directly affected is fuel; and the extra amount used is in direct proportion to the heat of the higher pressure over the lower; labor and maintenance are also somewhat increased.

Steam turbines depend upon the available energy in the steam for their mechanical power. As the pressures increase, more energy is placed in the steam and, therefore, less pounds of steam are required to accomplish the same result. For smaller amounts of steam it can readily be seen that less initial investment and, therefore, lower fixed charges and operating cost follow in order. The limit to which the initial boiler pressure of the paper mill can be taken is determined as before mentioned by digester temperatures. be made to exhaust at temperatures useful in digesters, that is to say, a non-condensing turbine could be placed between boiler pressure and digester pressure. However, to make such a turbine pay, the amount of steam must be large, the rate of flow must be regular, that is, a number of digesters should be in continuous service so obtaining a high steam load factor. The initial pressure must be relatively high, that is, in the order of 250 lb. or more. Very few cases have come to the attention of the author where this source of power can be even thought of because the installations now made have not taken the possibility into consideration.

Methods Available for Obtaining Low Pressure Steam

Having the upper limit of boiler pressure determined from the digester temperature or if no digesters are in use, from the standpoint of heat economy, the next step is to solve in the most economical manner, the method or methods to be used to take out the available heat between boiler pressure and process pressures.

The amount of steam that is demanded by process and the heat in it determines the size of turbo-generators that can be utilized between boiler pressure and process pressure. There are, of course, variations in the amount of process steam as likewise there are variations in the demands for electrical power and the two do not always coincide. Flexibility must be available and in general it may be said for a completely electrified mill, that is, one which takes its raw materials from the log state through to commercial



500 KW. 330 V. D. C. CURTIS TURBINE GENERATOR WITH EXCITER FOR PAPER MACHINE DRIVE. INTERNATIONAL PAPER CO

If there were no digesters, however, the limit is again determined by the amount of energy required for process steam and the amount of energy required for mechanical work. The two must balance each other or mechanical energy must be called in to make up the deficiency. This means additional cost of equipment and added operating expense.

It is not beyond the possibilities of turbine design to utilize the highest pressures that boilers and piping can stand. Turbines can paper, the power demands are far in excess of that available from the heat contained in the steam used in process between boiler and process pressures. In general, it may be said, however, that it will pay to develop all the available energy that there is in the steam between boiler and process pressure making up the deficit from other sources such as water power or condensing steam turbines. There are some cases, of course, where this is not true. As we are dealing with general cases rather than particular instances,

the previous statement may be used as a general rule. Each case must be settled by itself on the basis of one scheme against the cost of any other scheme.

There are occasions when low pressure steam generation would pay. These are very few and can be attributed generally to a surplus of water power. Electric boilers can here be used to convert the excess electrical energy into steam.

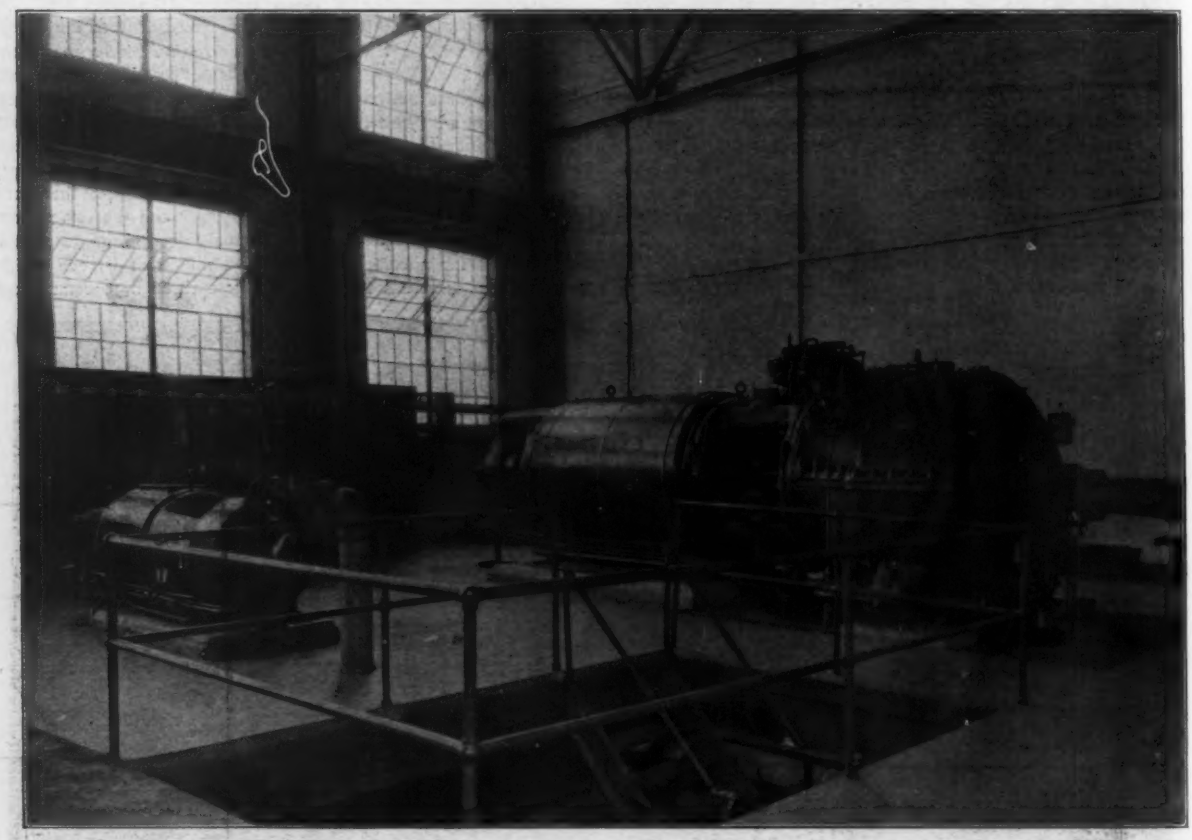
The chief methods, therefore, left for furnishing low pressure steam are:

(1) throttling, (2) non-condensing turbines, (3) extraction turbines, (4) combinations of the first three.

Going back to throttling, it is interesting to note that there are very few instances when throttling itself would pay. These instances are becoming less as the public becomes acquainted with other methods. The loss of available energy by throttling is the cause of its decreasing use. It is, of course, understood that there is no actual loss of heat in the transfer from high to low pressure.

Whether or not the original designers of paper machines and engines had in mind the balancing of mechanical power with heat obtainable from the exhaust of the driving engine is hard to ascertain but in any event, they came fairly close to getting what was most economical from this standpoint. Turbo-generators with motor drive on the paper machines seem to fulfill the two requirements even better than engines and at the same time give closer speed regulation. Unfortunately some rather loose work is done at times which disturbs this balance and gives an excess of generating capacity or low pressure steam. In some cases where the designers realize that they are not getting a balance they cover it up by putting in turbines of very low economy. A little more thought on the available heat energy required would determine the economical initial pressure. Some cases demand that the turbine be fairly uneconomical because it would cost too much to change other parts of the plant to realize the economy in turbine performance.

Variations in the quantity of steam required with constant electrical demand such as seasonal heating and low pressure cooking in odd cycles tend to limit the use of non-condensing turbines. Steam accumulators have been developed and are in use in some mills which wipe out the variations in steam demand and act as reservoirs to take excess steam when it is not required in the process and to give it up when the electrical demands are low. A great many mills have been successful in economical operation without accumulators because their systems are flexible enough to absorb excess and to furnish demands The electrical end is usually taken care of by operating the non-condensing turbines in parallel with hydro-electrical units or condensing turbines having the non-condensing turbine designed to give the maximum amount of steam required, filling in the electrical demands from the parallel sources of power, that is to say, the non-condensing turbine floats electrically on the rest of the system furnishing electrical energy in direct proportion to the steam demand.



2,500 KW. EXTRACTION AND A 300 KW. NON-CONDENSING 60 CYCLE CURTIS STEAM TURBINES. CENTRAL PAPER CO., MUSKEGON, MICH.

Utilizing Direct Current

The latest types of paper machine drives are utilizing direct current for the paper machine motors. Motor generator sets, alternating to direct current, with alternating current as the prime mover coming in either from steam turbines or water power supply the power. Relatively cheap prime mover power must be available

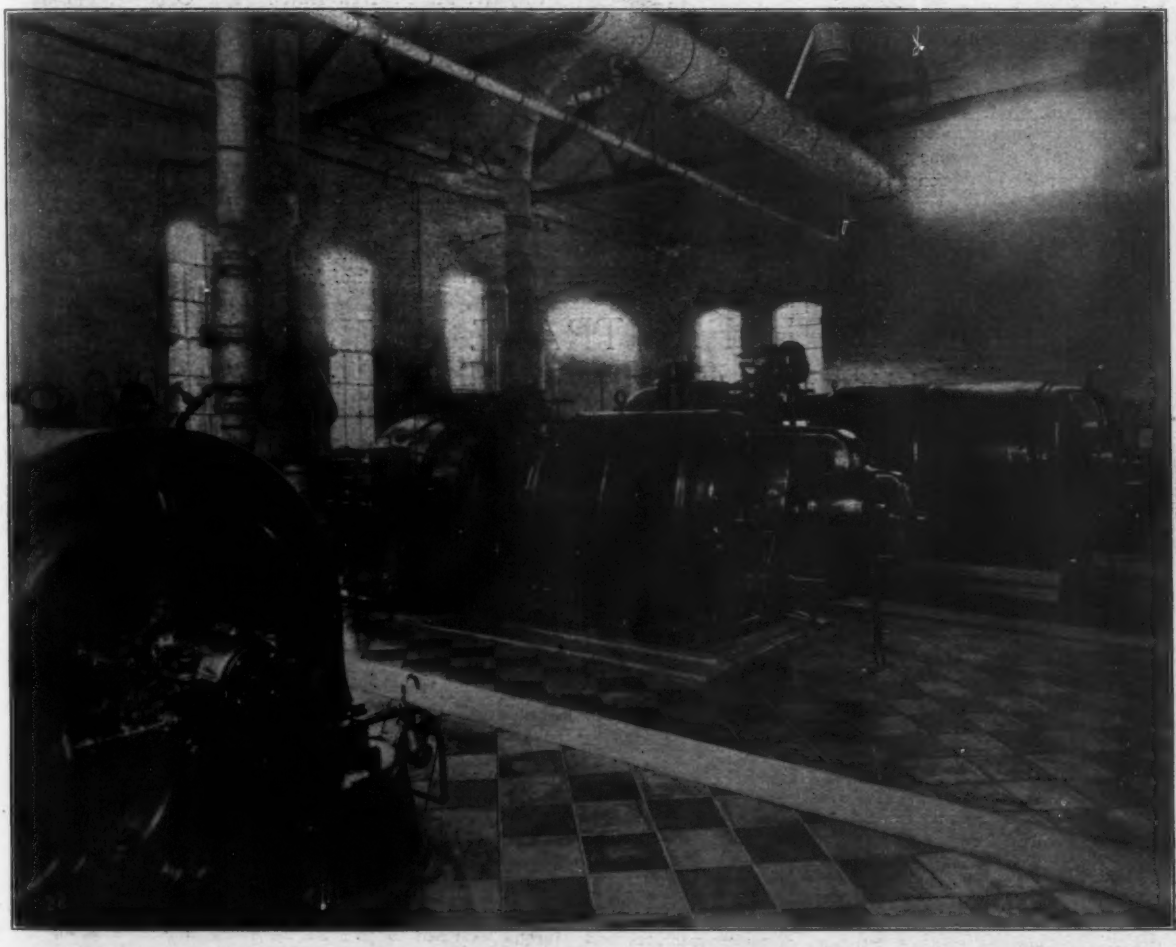
for this method as the fixed charges and losses of the motor generator set are to be added to the prime power costs to arrive at direct current power costs. The other alternative is to utilize non-condensing direct current turbines. The size of the electrical ends are fixed by the paper machine drives. The amount of steam available for the turbine is fixed by the drying demands of the paper machine. The adjustable unit between the two is the heat content of the steam at the turbine throttle. As pointed out before, this is governed by other conditions within the mill which are variable within reasonable ranges. Speed regulation of the turbine is obtained by the governor. The paper machine drive, however, demands that the voltage be variable in order to get speed ranges on the paper machine. Voltage regulators can be used to keep the speed of the paper machine constant at predetermined speeds due to the demands of the paper machine for adjustable speed. The DC turbine and motor-generator set are not available for other uses. On the other hand the exhaust steam from the turbine can be alternatively furnished to the paper machine which the turbine is driving or to other paper machines or process. Some mills prefer even to isolate the exhaust of their turbines so that there can be no chance of other demands affecting the supply of steam to the machine in question. Even with an accurate balance between mechanical power and exhaust steam laid out on paper it is not thought advisable to eliminate an alternative source of steam from consideration in most plants.

The non-condensing turbine for paper machine drive is not the only one that can be used to advantage in the mills where supercalenders, low pressure cooking and heating of beater water, bleaching, etc., are done. The supply of low pressure steam to these demands is a fine opportunity to obtain electrical power due to the difference in available energy between boiler pressure and process pressure. In this case alternating current generators would generally be used operated in parallel with other sources of the same type of current.

To summarize the non-condensing turbine, it may be said that in general its function is supplementary to other sources of electrical energy but that when so used it is more economical in its use of steam per kw. of output than other types of turbines supplying an equal amount of electrical energy and exhaust steam.

Extraction Condensing Turbine

The extraction turbine has an internal grid valve consisting of stationary and a moving annular ring with ports open in each of oblong sections. The blanks on the stationary ring provide means of shutting off the steam from the ports on the moving ring. Through an opening in the turbine casing at the high pressure side the grid valve opens or closes to force out more or less steam so giving a constant pressure in the extraction line. With an adjustable diaphragm in the extraction line, various pressures can be held for different quantities of steam demanded. Some steam is



3,000 KW. 750 KW. 60 CYCLE CONDENSING CURTIS STEAM TURBINES. P. H. GLATFELTER COMPANY, SPRING GROVE, PA.

TECHNICAL SECTION, PAGE 226

always required on the low pressure side of the grid valve which is not wasted but produces mechanical energy while it passes to the condenser. As less steam is passed out of the extraction line, more is required in the low pressure cylinder to carry a given electrical load, therefore, we have the combination in this turbine of a straight condensing turbine and a non-condensing turbine to supply variable steam and electrical demands, the variations in each need not coincide with each other. For moderate size plants which do not have low cost power from condensing turbines, extraction turbines frequently work out to be less expensive than the combination of condensing turbines with non-condensing turbines. This is especially true where there is a widely fluctuating demand for steam both hourly and seasonal. This can be readily understood if we consider that the non-condensing turbine must be arranged on both turbine and generator ends to correspond to the maximum demand for steam. If this is not done high pressure make up must be used. At the same time the condensing turbine operating in parallel must also be of such size as it will carry the maximum electrical load, therefore, we duplicate so far as electrical capacity is concerned a certain proportion of the required capacity in each generator.

On the other hand the extraction turbine has but one generator and two steam cylinders either one of which or both are capable of meeting both the electrical and steam demands.

To differentiate and determine which scheme should be used, the non-condensing or the extraction turbine, it is necessary to balance up the heat required to perform the various functions in the mill. If these problems are analyzed on a heat unit basis, the various parts will be shown up in their true value allowing a close balancing of the opposing amounts.

Paper Men as Immigration Delegates

The following manufacturers of paper have been named by Henry W. Stokes of Philadelphia, president of the American Paper and Pulp Association, to represent that organization at the National Immigration Conference to be held in New York, December 13-14 under the auspices of the National Industrial Conference Board:

P. T. Dodge, International Paper Company, New York City; C. A. Crocker, Crocker-McElwain Company, Holyoke, Mass.; E. R. Behrend, Hammermill Paper Company, Erie, Pa.; Hugh J. Chisholm, Oxford Paper Company, New York City; George W. Sisson, Jr., Racquette River Paper Company, Potsdam, N. Y.; H. A. Moses, Strathmore Paper Company, Mittineague, Mass.; Milton E. Marcuse, Bedford Pulp and Paper Company, Richmond, Va.; Frank L. Stevens, Stevens and Thompson Paper Company, North Hoosick, N. Y.; W. F. Brunner, Paterson-Parchment Paper Company, Passaic, N. J.; and A. D. Coffin, C. H. Dexter and Sons, Inc., Windsor Locks, Conn.

Henry W. Stokes, York Haven Paper Company, Philadelphia, Pa., will attend as president of the Association. Dr. Hugh P. Baker, secretary of the Association has been asked to serve as a member of a special committee to assist M. W. Alexander, managing director of the National Industrial Conference Board, in planning the conference.

Wallace Advisory Committee to Meet

Secretary Wallace of the United States Department of Agriculture has asked the recently selected Advisory Committee from the Paper Industry to the United States Department of Agriculture to meet him during the week of January 7, for its first meeting.

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Raw Materials

Composition of Different Straws and the Pulps Resulting from Them by Different Processes. Th. E. Blasweiler. *Papierfabr.* 21, 309-311 (July 1, 1923); 321-322 (July 8, 1923); 361-365 (Aug. 5, 1923); 373-376 (Aug. 12, 1923). The composition of oat straw is given as 45.49 per cent cellulose, 24.70 per cent pentosan, and 29.81 per cent lignin, on the dry and ash-free basis. The values for rye straw are, respectively, 42.83, 26.65, 30.52, and for rape straw 32.09, 25.52, and 42.39. Oat husks contain less cellulose and more pentasans and lignin. Comparative digestion experiments were carried out with sodium hydroxide, calcium oxide, sodium carbonate, edium sulphide, and sodium bisulphite. The tests with sodium hydroxide included treatment under pressure, in an open vessel, Steffen's method, and according to Beckmann in the cold. In general the sodium hydroxide effected the best solution of the incrustations. The lignin resisted the action of most of the chemicals but dissolved the pentosans.—J. L. P.

Pulp From Reeds. R. Dieckmann. *Papierfabr.* 21, 337 (July 22, 1923). Polemic against A. Klein, in this journal, 21, 303 (June 23, 1923).—J. L. P.

Hydrophytes as Raw Material for Paper. Anon. **Wochbl.** *Papierfabr.* 54, 1535-1536 (June 2, 1923). The use of aquatic reeds and rushes for paper manufacture has markedly increased within the last two years in Germany. Their growth and harvesting is described.—J. L. P.

Papermaking Materials. Uhlemann. *Papierfabr.* (Fest u. Ausland Heft) 21, 37-38 (June 9, 1923). A brief account of the raw materials for paper making from the earliest times to the present.—J. L. P.

The Causes of Wood Decay and Its Prevention. Fritz Hoyer. *Papierfabr.* (Fest u. Ausland Heft) 21, 65-74 (June 9, 1923). The subject of wood decay and its prevention is covered in a general way.—J. L. P.

Straw Paper and Straw Pulp Mills. George Kothen. *Papierfabr.* (Fest u. Ausland Heft) 21, 74-77 (June 9, 1923). The following topics are discussed with respect to the utilization of straw for the manufacture of paper supply and storage, disintegrating machines, cooking process, kollergang treatment, beating and the conversion to paper.—J. L. P.

Reed Materials. Willi Schacht. *Papierfabr.* (Fest u. Ausland Heft) 21, 63-64 (June 9, 1923). A review of the use of reeds in papermaking.—J. L. P.

The Constituents of Pulpwood. Rudolf Sieber. *Papierfabr.* 21, 317-321 (July 8, 1923). An address in which elaboration is made on the theme that wood consists mainly of carbohydrates existing in all degrees of polymerisation with consequent varying ease of hydrolysis. Lignin is probably a cyclic body.—J. L. P.

Defibering and Purification of Old Paper. George Kolb. Ger. pat. 370,000. *Wochbl. Papierfabr.* 54, 2409-2410 (Aug. 23, 1923). Old papers, suspended in a liquid at 5 per cent consistency, are subjected to a mechanical agitation in such a manner that the mixture cannot assume the same speed as the agitator. A loosening of the ink and colors on the surface of the paper is effected. Ger. pat. 370,001, addition to the preceding one, describes a mechanical arrangement by which the papers are treated.—J. L. P.

Process for the Manufacture of Paper Pulp. Pierre Hennique. Fr. pat. 554,140. Before grinding or cooking the wood is treated by known methods to remove the sap by subjecting to air, water, steam, alcohol, benzine, or other solvent, under pressure, or by subjecting to vacuum, or by a combination of the two methods.—A. P.-C.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

THE SEVENTY-FIVE-CENT DOLLAR IN BUSINESS*

By S. F. Fannon

I am sure that it is a pleasure for me to be here this afternoon and have just a part of your program. You have realized and learned long ago the value of good will. You have learned what it means to tie a customer to you through your sunshiny smile, through turning an attentive and listening ear to their troubles, through sympathy with them, and on account of this, the concerns you represent have increased their business to a great extent.

And yet men, with all the lessons that we have had, with all that we are learning about good will, I wonder how many of us have

S. F. Fannon.

ever stopped to realize just what we are suffering in this country because of the lack of application of good will in another line—not toward our customers, but toward the employees, whose hand and brain make possible production in quality and quantity. Do you realize that because we have failed to develop, as industries all over the country, a feeling of good will between employer and employee that we are losing twenty-five per cent of every dollar that we are investing in the pay envelope, that industry is putting one dollar in the pay envelope from which it is receiving but seventy-five cents in return today? A seventy-five cent dollar in business! What a stupendous loss—a loss which at once creates an economic waste, that cannot help but affect employer, employee and the entire country.

Major Factors in Industry

Let us consider for a moment or two the various major factors found in industry. Take machinery. We have ever spent a large amount of time and money upon machinery, that from it we might receive the maximum return for every dollar invested. We have kept our inventors busy applying their genius toward the development of this factor, that we might secure a higher production and the largest possible return on every dollar invested in machinery.

Day and night we are working upon the problem of raw materials. We have created our own research departments that we might locate sources from which we might secure a constant supply of the proper qualities, and thus eliminate all losses in raw materials.

There is hardly a newspaper or periodical published today that does not contain an article on management. Highly developed courses on management are to be found in the curriculum of our larger universities. We are putting forth every possible effort in order that there may be no loss in the dollar invested in management.

The same can be said of merchandise and markets. The mattters of style, the elements of fashion, the question of seasonable goods, the various channels of distribution, and numerous other related phases are all under continual scrutiny, not only by individual manufacturers, but also by associations of manufacturers in practically all lines today. We are maintaining experimental laboratories for the purpose of maintaining quality, decreasing cost, and developing new and additional uses of products, that we might secure the maximum return for the dollar invested in merchandise and markets.

But when we come to the dollar invested in the human factor, we find quite a different story. It does not seem possible that men who have shown such intelligence and foresight in handling the dollars invested in these other factors, would fail in many instances to provide against a loss in the dollar invested in men. There are a few employers who give intelligent and sympathetic consideration to the viewpoint of the workers. These employers are receiving a larger return for the money invested. Nevertheless, the truth remains that we are almost universally neglecting the dollar invested in the payroll envelope.

*Address delivered at the Tenth Semi-Annual Convention of the Cost Association of the Paper Industry, at the Sylvania Hotel, Philadelphia, on November 23, 1923.

Which Is Most Important?

Are we to admit that cash invested in plant and equipment exerts a more powerful appeal to the executive than cash invested in payroll? Is it possible that a machine made of iron and steel is more attractive to the executive than a machine made of flesh and blood? But man-power is vitally essential to machine-power and to the profitable operation of any industry. All factors found in industry and business depend upon the loyal support, intelligent co-operation, and harmonious production of the human element.

Nevertheless, mechanical factors commonly receive ninety-five per cent of the executive's attention, and the crumbs of five per cent are thrown to the human factor. In many plants at this moment engineering specialists are engaged in studying and improving conditions of equipment and process. This is as it should be—executive appreciation of science in machinery and processing adds to profit. But in how many plants will you find management sufficiently enlightened to realize that science in the human factor pays large dividends?

Why is it? Why is it that we are paying ninety-five per cent attention to plant and equipment and only five per cent to men? One man said to me, "Mr. Fannon, I'll tell you why. You know America is thinking of dollars and quite naturally we think of our largest investment and our largest investment is plant and equipment." Now that is a fallacy. Our largest investment is not in plant and equipment.

A short time ago in visiting a plant the president of that plant said to me, "This represents our largest investment. We have four million dollars in this plant." I said, "Is that so, your largest investment?" He said, "Yes, sir." I said, "Let us look at this for a moment or two. How many employees have you?" "Four thousand." "What is the average pay of those employees?" "Well, about twenty dollars a week." "Well, if that is true, every two and one-half years, sir, you are paying out in the payroll envelope an amount equal to what you have invested in plant and equipment."

In the average business cash invested in payroll will exceed cash invested in plant and equipment within two or three years, even in the most unusual enterprises payroll investment will exceed plant investment within five years.

Plant Cost and Payroll

Take for example your own plant and figure mentally its cost as compared to your annual payroll and you will find that there is not much difference between the two—the amortization of your plant is probably on a twenty-year basis, your payroll is paid every year.

And yet, how we safeguard the investment in plant and equipment. Why, we don't let a night go by without having it covered by insurance. How many times has this happened when the insurance has elapsed and we have spent the night thinking about other things when all of a sudden the whistle blows and the bell rings, and the owner of that plant, without stopping to dress, dashes madly down the street breaking all traffic laws to his plant, and then comes out wiping the perspiration from his forehead and tells his wife, "I tell you one thing, I am not going through another night like this, I am going to see that this old plant is equipped with insurance that will protect me."

But how many plants today have a protection on the larger investment, that of the payroll envelope? Necessary? Absolutely! Our industrial fire losses have averaged two hundred million dollars yearly—strife losses have equalled two billion dollars—a risk and waste ten times as great as that of fire.

It was but a year or so ago that I had the pleasure of going to Detroit and meeting with a company of men who were to celebrate a large contract that they had just received. What a celebration—they danced around like kids, laughing and crying, telling of the struggle that they had put forth for six or eight years that they might put their business on a paying basis. How their wives had sacrificed with them, and now that they had secured this contract, their little wives could have many of the things they had longed for. Their children could be educated according to their dreams. It was one of those celebrations that you love to be in.

Overlooking the Human Element

It took me about fifteen weeks to go from Detroit through the Southern district and back to New York, and when I stepped off the Pullman the New York *Times* had in headlines the story of a strike at that plant. In three weeks there was a cancellation of the contract. Why? Service could not be rendered. Was it because the management had not built a correct plant? Oh, no, it was a splendid plant. Was it because they had not secured proper machinery? No, sir, they had the highest class of machinery that money or brain could produce. Was their management inferior? No, the management was on a par with other industries. They had overlooked the prime factors—the human element.

We have been able to step up before the banker and we have been able to say to him, "Here is a contract I just received, sir, and I want you to look over it. We would like to have about one hundred or one hundred and fifty thousand dollars to help put this contract across. You know what we are doing in this community. We are spending a lot of money here, we are bringing in a lot of men," and the banker looks it over and smilingly reaches down into his desk and secures a long list of questions that have to be answered, and when we have answered those questions and attached to them the insurance policy of the plant, and possibly our life policy too, we would turn it in to the banker, and provided we were in good standing, we would receive the loan. But tomorrow we have something more to do.

Why? There is a new consciousness arising in the hearts and minds of the financial men of today. They are beginning to realize as never before that every dollar that comes in from the community must be safeguarded to the utmost. They are the trusted ones in whose hands thousands have placed their life's savings, and as such, must use every precaution against losses.

Thus in the future when we ask for loans we need not be surprised when the banker asks us, in addition to the usual queries, "What guarantee can you give that your employees will co-operate in carrying out this contract?" and if we cannot point to some adequate method of developing co-operation and loyal support of our employees, we cannot expect the loan to be granted.

We find that the conditions which led up to the present aggravated situation in industry have been the result of the development of industry itself rather than any actual desire or intent on the part of the employers to neglect their employees. Going back to the beginning of industry, we see the employer rolling up his sleeves, doffing his apron, and taking his place among his employees at the forge or bench. This close contact with his employees gave him a great opportunity to develop personal friendship, to give personal supervision, and furnish a good example of faithful work. Production was at its maximum in quality and quantity, so far as the primitive equipment and machinery permitted, for loyalty and co-operation ruled.

As the population of our country increased, so increased the demands on industry. And with this change came the new and varied problems of buying, selling, transportation, and finally competition.

And so it happened, that instead of the former close contact and friendly relationship between employer and employee, the day came when the employer left his employees in the workroom and went away to live in an office in front of the factory where he spent his days, and, unknown to the employees, many of his nights as well, in the strenuous duties of handling the increasing problems of his growing business.

But the workroom could not run itself. At this point the manager made his appearance in industry.

Function of the Manager

The function of the manager was at first to work side by side with the employees, just as the owner had done, but in a rapidly growing country the growth of industry was also rapid, and very soon the manager stopped working in the workroom and he too went away to live in an office just as the owner had done before him. The employees in the workroom were now under an assistant manager, and later on they were under a superintendent, who had under him minor executives known as foremen, supervisors, or overseers.

About this time the working classes began to realize that in union there is strength, and wishing to better their conditions, they brought into existence the Trade Union. In looking back over the past, we must admit that these unions have accomplished much good for the working classes.

Furthermore, the World War, which was the mightiest struggle of all history, was fought for the basic object of determining whether mankind would lead a hampered and restricted life under the iron rule of autocratic government, or enjoy a free life under democratic forms of government.

It was natural that the mental condition which questioned relations between citizens and governments also caused millions of men and women in industry to question the relations between employer and employee, in fact, to question the whole basis and structure of industry.

These events, like a plow and harrow moving over a field, have disturbed the minds of our employees, agitating them and developing a discontentment, but leaving a fertile field for sowing. But has the employer grasped the opportunity? Men, he has done what so many Americans are likely to do, that which I call America's greatest sin, he just neglected it. He let that field, plowed, harrowed and torn—the mind of the employee—go without a seeding.

Neglectful employers produce neglectful employees. For years the employer has neglected to educate the employee through various means at his disposal as to the facts about his business, its troubles and problems. He fails to tell him the advantages of working in his plant, its opportunities and responsibilities. I don't mean that he need go around and talk to them of his business or gather them around him for like purposes. But it is necessary to provide facts regarding his town, its institutions, the desirability of living there, and raising his family there. In short, management fails to recognize that *the viewpoint of the employee is the most neglected asset in industry.*

The result has been that the employee regards himself ignored and neglected by his employer. And, while the economic neglect may hurt and cut deeply into the feelings of the worker, it is the human neglect which hurts the most. A great many employers still imagine that the question involved in labor unrest is purely an economic question; that is, "one of wages in dollars and cents." But those who have looked into this matter deeply have found that the problem is not so simple, and that it also involves the social element, not the element of humane treatment, but that of simple human consideration. Studying the mind of the employee who is dissatisfied with his employment you will find that he feels little or no loyalty to the business, or to the management who personifies it. Why? Because no one has made any effort to give him the facts so as to explain the business and its problems. He understands little or nothing concerning the management's work in relation to production, or the management's pay. Why? Because no one has explained these things to him.

Loses Respect for Management

He is envious of the management's apparent freedom in going to and from work while he must labor by the time clock. He is told of the management's working quarters, with its carpeted floors and mahogany desks, while he must labor over some greasy machine. Time and again he has mentally compared the homes of the management with his own, and because no one has taken the time to explain the economic reason for these differences, he soon loses his respect for management, dislikes his employment, and, as a result, shirks on the job, loses some of his personal dignity and self-respect.

But this fertile field has not been entirely neglected. There is a mighty sales force—a company of men that realizes the value of this fertile field. That suave company of radicals who sow seeds of false principles, sinister ideas and class hatreds. They are saying, "That is the field, there is the place to sow. Do away with the bomb, the knife, and get down here in this field that is so filled with discontent, and sow our propaganda." Twenty-five thousand men sent out by the radicals to advocate and preach the very principles that undermine our great country, its Constitution, and its liberty. Five hundred and twenty-four periodicals and journals are placed every month in that fertile field.

And with nothing but neglect from the employer, do you wonder that the employee listens, understands, believes, and follows such leadership with confidence? To him it is a means to an end, the removal of those whom he believes neither respect him nor his labor, namely, capital and management.

The lack of sound and constructive human relationship in industry has caused fully as much trouble as lack of proper economical conditions in terms of dollars and cents, for it is a fundamental fact that the state of a workman's mind, much more than the state of his purse, determines his acts.

Many employers, say, "Mr. Fannon, I can answer the whole problem. If we will just reach down into our jeans and get a little more money and put it into the pay envelope, that will answer it." This is plainly unsound because thousands of workmen who are getting a larger day's pay are delivering from twenty-five to fifty per cent less than a full day's work. Take the building trades for instance; a bricklayer at present gets $12 per day and lays 400 bricks, while less than a decade ago he received $4 per day and laid 1,200 bricks. I only cite bricklayers because this industry has received much public notice, but employees engaged in manufacturing have frequently reacted to increases in much the same way. At one such plant, by actual test, we found the productivity of the workers to be thirty-two per cent of reasonable capacity. An almost unbelievable condition, but for the proven fact—and beyond the wildest imagination of the management of that plant.

I just came from a plant yesterday where they said, "We can answer that for you, Mr. Fannon. If you have your employment department select the employees with more care, just get the skilled laborer, that is the thing that counts." Why, men, I could take you to thousands of our most skilled employees, and I will show you time and time again the man who is producing but fifty to seventy-five per cent of what he could do.

Motive as Controlling Factor

Well, what is it? I will tell you what it is that controls the employee. You have a couple of lawyers here on the platform and they will tell you that when a crime is committed the first thing the law looks for is the motive. The motive is the controlling factor. But aside from acts governed by law, the existence and power of motives have been little understood.

In industry, the motives of workmen exert a tremendous influence for or against productive effort, and are thus the root of vast losses on payroll investment. And yet employers pay little or no attention to the motives of employees.

In various plants considerable attention is given to motion-study, but not to motive-study, although the motions of the workmen are controlled by their motives.

We have established the fact that every working force is made up of three types of employees, irrespective of size of plant, kind of product, open or closed shop, or any other conditions. Not three types of employees by sex, creed, vocation or rate of pay. But three types as regards Motives: Conservative, Radical and Neutral.

The proportions vary somewhat from one plant to another, but

Sherman Service has established through their analyses that in one hundred typical employees, ten per cent are of Conservative Motive, ten per cent of Radical Motive, and eighty per cent of Neutral Motive.

The ten employees of Conservative Motives produce a full day's work. There is no loss on their payroll dollar.

But the ten employees of Radical Motives produce only fifty per cent of a full day's work. There is a loss of fifty per cent on their payroll dollar.

And the eighty per cent of Neutral Motives produce only seventy-five per cent of a full day's work. There is a loss of twenty-five per cent on their payroll dollar.

The net result in this case, which is typical, is a loss in productive value of twenty-five per cent of payroll investment per hundred employees.

An employee of Conservative Motive is 100 per cent producer for the reason that he believes that it pays to apply himself loyally and diligently, and to give his employer as much as possible. His daily production reflects contentment, co-operation and active interest-in-the-job.

An employee of Radical Motive is a 50 per cent producer for the reason that he believes that it pays to restrict his efforts and to give the employer as little as possible. His daily production reflects discontent, antagonism and extremely active Hatred-of-the-job.

An employee of Neutral Motive is a 75 per cent producer for the reason that he believes that it pays to produce just enough to hold his job. His daily production reflects indifference, non-initiative and lack of Interest-in-the-job.

Correct Motive Saves Loss

Thus we have a loss of twenty-five per cent in production due to Motive. Correct this motive and we will have a product of higher quality at a smaller price, and you as salesmen realize what this means in the competitive markets that you have to meet today.

Just consider for a moment or two the cash value of these various motives. Take these one hundred men at $4 per day, and we are putting in the pay envelope each year, $120,000, out of which, as we have just seen, we are losing $30,000. A manager of a big plant once said to me, "If that is so, I would get fired." I said, "The only reason you are not fired is because the directors don't know it. They never stopped to realize it." Listen, twenty-five per cent loss in the payroll isn't very much after all, that is, it isn't very hard to lose. You know that is only twelve cents an hour on a $4 wage. But don't forget this, there is an octopus with nine great arms reaching out after that—Absenteeism, Labor Turnover, Waste of Time, Waste of Materials, Waste of Tools, Spoilage of Machinery, Waste of Supervision, Underproduction in Quality and Quantity—reducing it down to one and three-tenths cents an hour.

Industrial unrest is not a temporary condition which is apt to blow over in a little while. A fire in a building does not put itself out. Don't get the impression that all is well in your business just because the surface is calm. There is not much difference between passive good will and antagonism. Passive good will yields but 75 per cent of reasonable productiveness. What you need is active good will and it can be had.

It is not the employees' fault that they now hold unsound or unfavorable views of their employer. The plain truth is that it is largely management's fault, because they do not apply constructive education and constructive contact for them. The average employee is inherently honest in his or her beliefs on industrial problems. If your employees bear unsound beliefs, it is not wholly their fault. If they feel a greater degree of confidence toward agitators and malcontents than toward you as an employer, the answer is that these leaders have been on the job and have earned and secured their confidence, while the employer has lain down on the job and ignored his golden opportunity.

Legislation Not the Cure

Don't bolster up on the belief that legislation may hold the cure for your industrial problem. There may be some desirable legislation to be achieved, but the co-operation of your employees is of vital importance, in securing the enactment of any constructive legislation, as well as in the elimination of any unsound legislation now in existence.

Your problems cannot be wholly solved through so-called welfare activities. I have had the pleasure of being head of one of the best known, if not the largest, welfare work in the world. When I became head of this welfare work I wrote home and told my folks about it. I said I was going to answer the problem between employer and employee, and that I would give to them all the credit. Well, that Irish preacher Dad of mine had been carrying a red pencil around for years. I never saw him use it, but he did this time. With that red pencil he wrote across the face of my letter "p-s-h-a-w" and underscored it, and then mailed back my letter. Now, that set me to thinking, and those thoughts led me to the decision that it is a mighty poor time to give a fellow anything when you are having trouble with him. We must not confound humane treatment with human consideration.

You are asking, "Is there a remedy, and if so, of what does it consist?" I am like the speaker before me, I am optimistic. I believe that all we have to do today is to awaken the American public to a full realization of a condition, drive it home, and we will always find an answer to it. We will work our way out of the blackest of storms into the clearest of sunshine. And so it has been with the question we are discussing today. We have found a remedy, and that remedy is education. And while it seems a simple word, it is not as simple in its application as it seems to you at this time. I don't mean by education that you are to put seats in a certain room of your factory and then call in your employees and give them certain lessons like in a primary class. Oh, no! Not an education that comes from the executive down, but an education that comes from the men to the men in their own language, the very kind of an education that you give the customer when you send out advertisements. If your house sends out an advertisement and you find that it is not doing any good because it is either going over or under the heads of the people you want to sell, you correct it. You had to put it on the customers' level, and that is the way that education must be applied to the employee.

One gentleman at a recent meeting asked me, "What good will constructive education do in my business, which is thoroughly unionized?" and since a similar thought may be in the minds of some of you here, I will give the same answer.

By proper education of the rank and file it will select and influence leadership and function in a manner conducive to the ultimate best interests of all concerned.

Results of Incorrect Understanding

Surely if radical influence can bring about outlaw strikes in such strongly unionized industries as the coal fields of Pennsylvania and the shoe manufacturers of Brockton, constructive influence can bring about conservative action—not alone in controversial matters, but in their everyday relationship. Indolence, insubordination and restricted production are all results of incorrect understanding.

As a result of thirteen years of practical experience in industrial co-ordination, we have learned that in the solution of this problem everything depends upon the sincerity and spirit with which you approach it. The method of education is no less important.

Bear in mind that there has already developed a gulf between management and employee and any outward move by management would likely be viewed with suspicion and distrust. Some one would raise the cry "What's up the boss's sleeve?" "What's he trying to put over on us now?" Again any stereotyped method of education cannot wholly accomplish the purpose, since it fails to deal with existing pertinent factors, and if the message should be paradoxical with the grievous existing condition, it is likely to do much harm.

(*Continued on page 70*)

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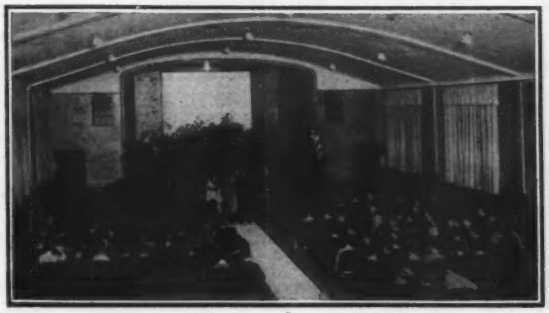

Autumn Wedding at Parchment Hall

On this occasion, the first Wedding to be formally celebrated by Parchment folks in their Community House, Miss Katherine Hassing of the office staff and Mr. Roy Snyder of the Parchment Division were united in marriage by the Rev. O. R. Grattan, Community Pastor. After the ceremony, supper was served in the dining room below.

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NEW YORK IMPORTS

WEEK ENDING DECEMBER 8, 1923

SUMMARY

News print .....311 bls.
Cigarette paper .....2,521 cs., 5 bls.
Packing paper .....395 bls.
Wrapping paper .....3,560 rolls, 11 bls.
Drawing paper .....38 cs.
Decalcomania Paper .....9 cs.
Straw paper .....158 rolls
Miscellaneous paper,
105 cs., 5 bls., 3,011 rolls.

CIGARETTE PAPER

American Tobacco Co., Zarembo, Bordeaux, 1,300 cs.
De Mauduit Paper Corp., Zarembo, St. Nazaire, 199 cs.
R. J. Reynolds Tobacco Company, by same, 950 cs.
The Surbrug Co., Suffren, Havre, 15 cs.
Gimbont freres, by same, 5 cs.
Rose Frank, Editor, Havre, 40 cs.
Zarro Tobacco Co., Britannia, Lisbon, 12 cs.
Ezra Levy, Braga, Constantinople, 5 bls.

DRAWING PAPER

A. Giese & Son, La Bourdonnais, Havre, 12 cs.
E. Dietzgen & Co., Siam City, Hamburg, 25 cs.

DECALCOMANIA PAPER

C. W. Sellers, George Washington, Bremen, 9 cs.

NEWS PRINT

M. O'Meara Co., Teresa, Trieste, 311 bls.

STRAW PAPER

A. Vuyck, Schodack, Rotterdam, 158 rolls.

WRAPPING PAPER

Wilkinson Bros. & Co., Inc., Schodack, Rotterdam, 1,044 rolls.
C. K. MacAlpine & Co., Hansa, Hamburg, 2,516 rolls.
C. K. MacAlpine & Co., by same, 11 bls.

PACKING PAPER

Republic Bag & Paper Co., Teresa, Trieste, 239 bls.
New York Trust Company, by same, 106 bls.
J. P. Hefernan Paper Co., Hjelmaren, Gothenburg, 50 bls.

PAPER

D. S. Walton Co., Hjelmaren, Gothenburg, 5 bls.
D. S. Walton Co., by same, 117 rolls.
Melby, Kuttroff & Co., Inc., by same, 979 rolls.
Fernstrom Paper Co., Inc., by same, 1,244 rolls.
Blauvelt Wiley Paper Mfg. Co., by same, 98 rolls.
DuPont Cellophone Co., Suffren, Havre, 19 cs.
Japan Paper Co., Ontario, Havre, 4 cs.
C. H. Boulin, by same, 39 cs.
C. G. Keferstein, Derfflinger, Bremen, 573 rolls.
C. B. Richard & Co., Siam City, Hamburg, 10 cs.
Heemsoth Basse & Co., by same, 22 cs.
Gimbont freres, Paris, Havre, 7 cs.
Whiting & Patterson, by same, 2 cs.
H. D. Cathy Co., by same, 2 cs.

RAGS, BAGGING, ETC.

Castle & Overton, La Bourdonnais, Havre, 42 bls.
L. H. Abenheimer, Siam City, Hamburg, 188 bls.
Goldman, Sachs & Co., by same, 255 bls.
Goldman, Sachs & Co., Zarembo, St. Nazaire, 82 bls.
P. Berlowitz, by same, 189 bls.
E. J. Keller Company, Inc., by same, 60 bls.
E. J. Keller Company, Inc., Fred. VIII, Copenhagen, 67 bls.
E. J. Keller Company, Inc., Pr. Fillmore, Stockholm, 59 bls.
Katzenstein & Keene, Inc., Independence, Hamburg, 105 bls.
Salomon Bros. & Co., Liberty, Dunkirk, 36 bls.
J. T. Lodge, Editor, Havre, 17 bls.
Atlas Waste Mfg. Co., Paris, Havre, 4 bls.
Irving Bank-Columbia Trust Co., Ontario, Havre, 15 bls.
International Acceptance Bank, Boston City, Bristol, 275 bls.

COTTON WASTE

W. Hughes & Co., Schodack, Rotterdam, 198 bls.

PAPER STOCK

M. O'Meara Company, California, Glasgow, 192 bls.
Equitable Trust Company, Norfolk Range, Leith, 38 bls.

OLD ROPE

International Purchasing Company, Editor, Havre, 51 coils.
Katzenstein & Keene, Schodack, Rotterdam, 88 coils.
E. J. Keller Company, Inc., Zarembo, St. Nazaire, 222 coils.
Stone Bros. & Galaup, by same, 54 coils.
Brown Bros. & Co., Siam City, Hamburg, 13 coils.
Brown Bros. & Co., Boston City, Bristol, 277 coils.
Brown Bros. & Co., Moyo Maru, Marseilles, 60 coils.
Salomon Bros. & Co., Norfolk Range, Leith, 196 coils.

WOOD PULP

Woodpulp Trading Co., Ltd., Drottningholm, Gothenburg, 1,197 bls. Kraft pulp.
Woodpulp Trading Co., Ltd., Pr. Fillmore, Bremen, 698 bls. sulphite pulp.
Tidewater Papermills Company, G. Heiberg, Miramichi, 17,697 bls. wood pulp.
Pagel, Horton & Co., Inc., Hjelmaren, Gothenburg, 1,200 bls. wood pulp.
Bulkley, Dunton & Co., by same, 375 bls. wood pulp.
American Woodpulp Corp., Derfflinger, Bremen, 450 bls. wood pulp.
H. Hollesen, by same, 2,210 bls. wood pulp.
Castle & Overton, by same, 135 bls. wood pulp.

WOOD FLOUR

A. Kramer & Co., Stockholm, Gothenburg, 1,350 bags.

CASEIN

Atterbury Bros., Inc., Boswell, Buenos Aires, 350 bags.
T. M. Duche & Sons, by same, 834 bags.

PHILADELPHIA IMPORTS

WEEK ENDING DECEMBER 8, 1923

Baldwin Universal Co., Inc., Siam City, Hamburg, 156 rolls wrapping paper.
E. J. Keller Company, Inc., by same, 186 bls. rags.
E. J. Keller Company, Inc., by same, 196 bls. cottons.
Corn Exchange Bank, by same, 333 bls. rags.
Philadelphia National Bank, by same, 35 bls. rags.
Philadelphia National Bank, Norfolk Range, Leith, 47 bls. rags.
Equitable Trust Company, Norfolk Range, Dundee, 200 bls. paper stock.
Castle & Overton, Zarembo, St. Nazaire, 185 bls. rags.
W. Schall Company, by same, 154 bls. rags.
E. J. Keller Company, Inc., by same, 335 bls. rags.
Katzenstein & Keene, Inc., Zarembo, Bordeaux, 163 bls. rags.
Castle & Overton, by same, 179 bls. rags.
Katzenstein & Keene, Inc., M. Merchant, Manchester, 76 bls. new cuttings.
Castle & Overton, Elmsport, Rotterdam, 76 bls. bagging.
Castle & Overton, by same, 101 bls. rags.
Castle & Overton, Beemsterdyk, Rotterdam, 1,172 bls. rags.
Castle & Overton, Hameln, Hamburg, 42 bls. rags.
Castle & Overton, Westfalen, Hamburg, 135 bls. rags.
E. J. Keller Company, Inc., Westfalen, Stockholm, 118 bls. rags.
E. J. Keller Company, Inc., W. Hemsoth, Hamburg, 733 bls. rags.
E. J. Keller Company, Inc., Proteo, Venice, 400 bls. rags.
E. J. Keller Company, Inc., Proteo, Trieste, 610 bls. rags.
E. J. Keller Company, Inc., Elmsport, Rotterdam, 519 bls. rags.
E. J. Keller Company, Inc., Beemsterdyk, Rotterdam, 245 bls. rags.
E. J. Keller Company, Inc., Alexandra, Copenhagen, 752 bls. rags.
E. J. Keller Company, Inc., by same, 117 bls. bagging.
Castle & Overton, Westfalen, Hamburg, 132 bls. wood pulp.
M. Gottesman & Co., Inc., Naperian, Hamburg, 345 bls. wood pulp.
Mead, Patton & Co., Inc., Dorte Jensen, Chatham, N. B., 19,842 rolls sulphite pulp.
D. M. Hicks, Norfolk Range, Leith, 87 coils old rope.
E. J. Keller Company, Inc., Siam City, Hamburg, 32 coils old rope.
Johaneson, Wales & Sparre, Inc., C. H. Liljevalch, Kramfore, 3,000 bls. wood pulp.
Johaneson, Wales & Sparre, Inc., Tortugas, Gothenburg, 1,875 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING DECEMBER 8, 1923

D. S. Walton & Co., Hjelmaren, Gothenburg, 108 bls. paper.
Scandinavian Pulp Agency, Inc., by same, 2,613 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., by same, 2,540 bls. Kraft pulp.
J. Andersen & Co., by same, 4,600 bls. wood pulp.
M. Gottesman & Co., Inc., Tortugas, Christiania, 500 bls. wood pulp.
Atterbury Bros., Boswell, Buenos Aires, 350 bags casein.
First National Bank of Boston, by same, 667 bags casein.
Johanesson, Wales & Sparre, Inc., Ostudal, Kramfors, 600 bls. sulphite pulp.

BALTIMORE IMPORTS

WEEK ENDING DECEMBER 8, 1923

Pagel, Horton & Co., Inc., Hjelmaren, Gothenburg, 750 bls. sulphite pulp.
Bulkley, Dunton & Co., by same, 1,625 bls. sulphite pulp.
The Borregaard Company, by same, 3,125 bls. wood pulp.
Castle & Overton, Westfalen, Hamburg, 132 bls. wood pulp.
Johanesson, Wales & Sparre, Inc., Sdifjord, Holmsund, 21,000 bls. sulphate.

NEW ORLEANS IMPORTS

WEEK ENDING DECEMBER 8, 1923

Castle & Overton, Bruges, Havre, 415 bls. rags.

GALVESTON IMPORTS

WEEK ENDING DECEMBER 8, 1923

E. J. Keller Company, Inc., Federal, Ghent, 98 bls. rags.

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New York Market Review

OFFICES OF THE PAPER TRADE JOURNAL,
WEDNESDAY, DECEMBER 12, 1923.

With the holiday season well upon the trade the paper market showed increasing signs of vigor during the past week. While there was nothing extraordinary about the buying it seemed to be more positive in quality and inquiries with a view toward contracts for the new year are coming in all the time.

Taking a long view at the situation things are not bright enough to warrant any great optimism, but it is certain that they will be better soon than they are now. The expectation of a boom year in 1924 is nothing now but a glimmering hope in the breasts of the most sanguine.

There are several elements in the situation which are as yet unknown. These may be summed up adequately in the question of just what Congress is going to do. The admirable message of President Coolidge with its sanity and fearlessness has inspired confidence in every citizen who read it. This is bound to have a salubrious effect on business. There seems to be no doubt in the President's mind that a reduction of taxes is the primary need of the nation at this time and in that opinion leading economists concur.

When the taxes were established the country was in the midst of the most terrific boom that it has ever known. Even the tremendous drain on the national finances which came with America's entry in the war could not check it. The poorest business man developed a Midas touch. Everything he turned his hand to made money.

Now all that is changed. Bad business men who made money in those days are sweeping out the offices of the wiser ones now. Profits are being won in the midst of terrific competition and only the shrewd man can exist. Does it not seem an altogether ridiculous thing that when the paper industry with all the others has been forced to go through a very painful readjustment it should still be taxed as though it were at the peak of the late boom?

Meanwhile, news print continues to be the leader in the local market. Rolls moved with the same satisfactory regularity as they have for the past few months. Sheets followed close on the heels of rolls and side runs were not far behind. While the present condition is no love feast for the news print men and competition still continues strong they are certainly the most fortunate ones in the industry today.

The higher grade papers, including ledgers, bonds, writing and book, are in somewhat better demand with prices firmer. The open market is dull, but contract business is fairly good though not quite up to the expectations of manufacturers a month or two ago.

Tissues, kraft and manila are all rather sluggish, although the first of these has picked up somewhat and the others have every indication of doing so. The open market had few large lots moving through it, although prices were fairly firm all around.

Board is about the same as usual with a somewhat better demand and prices remaining at the same level. Spot goods are not moving as fast as manufacturers might wish, but it is expected that next week will see a decided change for the better.

Mechanical Pulp

Mechanical pulp was in pretty good demand during the week with no real price changes. Lots of considerable size moved through the open market and manufacturers seem to be fairly well satisfied with the business they are getting.

Chemical Pulp

Chemical pulp was not in quite as good demand as ground wood, although the mills are running at a pretty good rate. Prices on the whole have remained the same with little prospect of any real changes.

Old Rope and Bagging

Rope has seen quite a jump in price during the past week, mixed strings running up a couple of cents on the pound in some quarters. Bagging is also in good shape, with advanced prices all along the line. The demand has increased considerably and dealers say that they are doing an excellent business.

Rags

The high prices of cotton has had a direct bearing on the rag market in that it has advanced all prices considerably. In the lower grades the demand is good and in most of the higher ones it is picking up fast.

Waste Paper

Waste paper is also in good demand, though not so good as rags. The week has seen some advances in price and the cheaper grades in this market also are moving with satisfactory speed.

TORONTO PAPER BUSINESS

(*Continued from page* 44)

States market and had their gangs nicely organized, word was received by the agent, Alex. Moore, of Cape Croker, forbidding cutting any more and instructing him to collect five cents per bundle from the exporter for trees already cut. Naturally the Indians are very much disappointed and wrathy at this action on the part of the Department. They had vision of considerable extra money from the tree trade to help carry them over the winter. However, those cutting from private land are still continuing and about twelve cars have gone forward to Pittsburgh. The tree business has provided considerable labor and a good deal of money has been set in circulation as a result.

Could Not Get Labor When Needed

In its effort to secure labor when it thought it must be faced with a shortage this winter, the Spanish River Pulp & Paper Co. had an interesting experience. A representative of the firm who was in Toronto lately, said the company had contracted with a steamship concern to furnish it with several hundred men during August and it was unable to obtain any. The company would have been able to give them the experience necessary for a winter in the woods during September and October, but now it can employ only experienced lumber workers, and few of these, he said.

"It hardly seems right to be employing Poles, Finns and other foreigners when Britishers are idle. This was our experience," said the official. "We were asked by the C. P. R. to take men after the harvest—delivered to our station free of charge, I believe—but we could not employ any."

Notes and Jottings of the Industry

A provincial charter has been granted the International Container Co., Limited, of Toronto, to buy and sell patents, concessions, licenses, etc., and to deal in goods of various kinds. The authorized capital is $60,000, and among the incorporators are William J. H. Morris and Gordon B. Jackson, of Toronto.

The Provincial Paper Mills, Limited, of Toronto, report that they have orders booked well ahead for their special sulphite bond which is being turned out at their Port Arthur mill and is finding a ready market at home as well as abroad. The company have been running on it for the past two months.

E. J. Zavitz, provincial forester of Ontario, in a recent address before the Canadian Club at Simcoe, stated that the lumber, pulp and paper industry had absorbed capital of $200,000,000, provided work for 42,000 persons with a payroll of $36,000,000, produced annually profits valued at $36,000,000, and yielded a provincial revenue of $4,000,000.

J. L. McDougall, Crown Timber Agent, of North Bay, Ont., says that the cut of pulpwood and pine in that district will be about normal this winter. Some difficulty was encountered in the early part of the season to secure men but at the present time all the camps have a fair supply. Weather conditions have been good.

C. W. Illiff, of John Dickinson & Co., Limited, paper manufacturers, Watford, England, was in Toronto recently calling upon the trade.

Market Quotations

Paper Stock Securities

New York Stock Exchange closing quotations December 11, 1923.

	BID	ASKED
American Writing Paper Company, pref.	2	2¼
International Paper Company, com.	33	33½
International Paper Company, pref. stamped	62	63
Union Bag & Paper Corporation	60	61

Paper

F. o. b. Mill		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—f. o. b. Mill—		
Rolls, contract	3.75 @	4.00
Rolls, transit	4.00 @	4.25
Sheets	4.25 @	4.50
Side runs	3.50 @	4.15
Book, Cased—f. o. b. Mill—		
S. & S. C.	7.25 @	9.00
M. F.	7.00 @	8.75
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—f. o. b. Mill—		
White No. 1	.80 @	.90
White No. 2	.85 @	.95
Colored	1.15 @	2.00
Anti-Tarnish	1.50 @	2.00
Kraft	.95 @	1.15
Manila	.78 @	.85
Kraft—f. o. b. Mill—		
No. 1 Domestic	6.00 @	6.25
No. 2 Domestic	5.25 @	5.75
Imported	4.65 @	5.20
Manila—		
No. 1 Jute	8.50 @	9.00
No. 2 Jute	7.75 @	8.50
No. 1 Wood	4.75 @	5.25
No. 2 Wood	4.00 @	4.50
Butchers	4.25 @	4.75
Fibre Papers—		
No. 1 Fibre	5.50 @	5.75
No. 2 Fibre	5.00 @	5.25
Common Bogus	3.50 @	—
S. Screening	3.25 @	3.75
Card Middles	4.00 @	5.00
Boards—per ton—		
News	55.00	@60.00
Straw	61.00	@63.00
Chip	50.00	@55.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	65.00	@75.00
Wood Pulp	70.00	@75.00
Container	70.00	@80.00
Sulphate Screenings—		
Coarse	.80 @	.90
Refined	1.75 @	2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)		
No. 1 Imported	40.00	@45.00
(F. o. b. Mill)		
No. 1 Domestic	40.00	@45.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)		
Sulphite (Imported)—		
Bleached	4.50 @	5.00
Easy Bleaching	3.50 @	3.75
No. 1 strong unbleached	3.30 @	3.50
No. 2 Strong unbleached	2.85 @	3.10
No. 1 Kraft	3.25 @	3.40
Sulphate—		
Bleached	4.00 @	4.15
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	4.30 @	5.00
Easy Bleaching Sulphite	3.25 @	3.50
News Sulphite	3.00 @	3.25
Mitscherlich	3.20 @	3.30
Kraft (Domestic)	3.10 @	3.30
Soda Bleached	4.25 @	4.35

Domestic Rags

New Prices to Mill, f. o. b. N. Y.		
Shirt Cuttings—		
New White, No. 1	12.50	@13.00
New White, No. 2	6.00 @	6.50
Silesias, No. 1	7.00 @	7.50
New Unbleached	10.50	@11.00
Washables	5.00 @	5.50
Fancy	5.75 @	6.25
Blue Overall	7.25 @	8.25
New Blue	5.00 @	5.55
New Black Soft	4.75 @	5.25
New Light Seconds	2.85 @	3.10
O. D. Khaki Cuttings	4.25 @	4.50
Men's Corduroy	3.75 @	4.00
New Canvas	6.50 @	7.00
New Black Mixed	2.60 @	2.80
White, No. 1—		
Repacked	5.75 @	6.25
Miscellaneous	5.00 @	5.25
White, No. 2—		
Repacked	4.00 @	4.25
Miscellaneous	3.60 @	3.80
St. Soiled, White	2.90 @	3.10
Thirds and Blues—		
Repacked	2.75 @	3.00
Miscellaneous	2.45 @	2.55
Black Stockings	2.75 @	3.00
Roofing Rags—		
Cloth Strippings	1.50 @	1.60
No. 1	1.50 @	1.60
No. 2	1.30 @	1.40
No. 3	.85 @	.95
No. 4	.85 @	.95
No. 5A	1.00 @	1.10

Foreign Rags

New Light Silesias	5.50 @	7.50
Light Flannelettes	8.00 @	
Unbl'chd Cottons	7.50 @	8.50
New White Cuttings	10.00	@11.00
New Light Oxfords	6.00 @	7.25
New Light Prints	4.50 @	6.00
New Mixed Cuttings	2.00 @	2.50
New Dark Cuttings	1.80 @	2.20
No. 1 White Linens	10.00	nominal
No. 2 White Linens	6.50	nominal
No. 3 White Linens	5.00	nominal
No. 4 White Linens	3.50	nominal
Old Extra Light Prints	2.50	nominal
Qrd. Light Prints	2.25	nominal
Med. Light Prints	2.00	nominal
Dutch Blue Cotton	2.50	nominal
German Blue Cottons	2.00	nominal
Ger. Blue Linens	3.00 @	3.25
Checks and Blues	1.25 @	1.50
Dark Cottons	1.25 @	1.40
Shoppery	1.00 @	1.05
French Blues	2.25	nominal

Bagging

Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.20 @	1.30
Domestic	1.20 @	1.30
Wool, Tares, light	1.30 @	1.40
Wool, Tares, heavy	1.30 @	1.40
Bright Bagging	1.10 @	1.20
Sound Bagging	.90 @	1.00
Manila Rope—		
Foreign	6.25 @	6.50
Domestic	6.50 @	6.75
New Bu. Cut	2.15 @	2.25
Hessian Jute Threads—		
Foreign	2.00 @	2.25
Domestic	2.00 @	2.10

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.32 @	.36
No. 2	.29 @	.31
No. 3	.34 @	.36
India, No. 6 basis—		
Light	.17 @	.18
Dark	.16 @	.17
B. C., 18 basis	.41 @	.42
A. B. Italian, 18 Basis	.51 @	.61
Finished Jute—		
Dark, 18 basis	.29 @	.30
Light, 18 basis	.26 @	.27
Jute Wrapping, 3-6 Ply—		
No. 1	.20 @	.23
No. 2	.18 @	.20
Tube Rope—		
4-ply and larger	.15 @	.17
Fine Tube Yarn—		
5-ply and larger	.19 @	.21
4-ply	.20 @	.22
3-ply	.20 @	.22
Unfinished India—		
Basis	.16 @	.17
Paper Makers' Twine		
Balls	.09 @	.11
Box Twine, 2-3 ply	.14 @	.15
Jute Rope	.15 @	.16
Amer. Hemp, 6	.30 @	.32
Sisal Hay Rope—		
No. 1 Basis	.14 @	.16
No. 2 Basis	.10 @	.12
Sisal Lath Yarn—		
No. 1	.14 @	.15
No. 2	.11 @	.13
Manila Rope	.18 @	.19

Old Waste Papers

(F. o. b. New York)		
Shavings—		
Hard, White, No. 1	4.10 @	4.20
Hard, White, No. 2	3.25 @	3.35
Soft, White, No. 1	3.20 @	3.40
Flat Stock—		
Stitchless	1.80 @	1.90
Over Issue Mag.	1.80 @	1.90
Solid Flat Book	1.60 @	1.85
Crumbled No. 1	1.35 @	1.45
Solid Book Ledger	2.25 @	2.35
Ledger Stock	2.00 @	2.15
New B. B. Chips	.70 @	.80
Manilas—		
New Env. Cut	2.55 @	2.65
New Cut No. F	1.85 @	2.10
Extra No. 1 old	1.40 @	1.50
Print	1.10 @	1.20
Container Board	.95 @	1.00
Bogus Wrapper	.85 @	.95
Old Krafts, machine compressed bales	2.10 @	2.20
News—		
No. 1 White News	2.00 @	2.15
Strictly overissue	1.10 @	1.20
Strictly Folded	.85 @	.95
No. 1 Mixed Paper	.55 @	.70
Common Paper	.40 @	.55

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill		
All Rag Bond	35 @	40
No. 1 Rag Bond	30 @	35
No. 2 Rag Bond	14 @	25
Water Marked Sulphite	9½ @	13
Sulphite Bond	7¾ @	10¾
Sulphite Ledger	9½ @	14
Superfine Writing	18 @	24
No. 1 Fine Writing	14 @	18
No. 2 Fine Writing	12 @	14
No. 3 Fine Writing	9 @	12
No. 1 M. F. Book	5¾ @	7½
No. 1 S. & S. C. Book	6¼ @	7¾
Coated Book	8 @	10
Coated Label	8 @	10
News—Rolls, mill	3¾ @	4½
News—Sheets, mill	4¼ @	4¾
No. 1 Manila	5 @	6½
No. 1 Fibre	5¼ @	6¾
No. 2 Manila	4¾ @	5
Butchers' Manila	4½ @	4¾
No. 1 Kraft	5¾ @	6¾
No. 2 Kraft	5½ @	6
Wood Tag Boards	4½ @	6
Screenings	3½ @	3¾
Boards, per ton—		
Plain Chip	$45.00	@50.00
Solid news	50.00	@55.00
Manila Lined Chip	60.00	@62.50
Container Lined—		
85 Test	70.00	@75.00
100 Test	75.00	@80.00

Old Papers

F. o. b. Chicago		
Shavings—		
No. 1 Hard White	3.70 @	3.80
No. 1 Soft Shav.	2.90 @	3.00
No. 1 Mixed	1.30 @	1.40
No. 2 Mixed	1.20 @	1.30
White Envel. Cuttings	3.70 @	3.80
Ledgers and Writings	1.80 @	—
Solid Books	1.70 @	—
No. 1 Books, Light	1.45 @	—
Blanks	2.25 @	2.30
Ex. No. 1 Manila	2.30 @	2.40
Manila Envelope Cuttings	2.50 @	2.60
No. 1 Manilas	1.35 @	1.45
Folded News (over issue)	1.00 @	—
Old Newspaper	.95 @	—
Mixed Papers	.85 @	.90
Straw Clippings	.85 @	.90
Binders' Clippings	.85 @	.90
Kraft	2.25 @	2.35
New Kraft Cuts	2.45 @	2.55
Roofing Stock, f. o. b. Chicago, Net Cash—		
No. 1	33.00 @	—
No. 2	31.00 @	—
No. 3	29.00 @	—
No. 4	29.00 @	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.10 @	.60
Ledgers	.15 @	.40
Writings—		
Superfine	.15 @	.20
Extra fine	.12 @	.22
Fine	.20 @	.30
Fine, No. 2	.20 @	.25
Fine, No. 3	.15 @	.20
Book, M. F.	.06 @	.11
Book, S. S. & C.	.08 @	.15
Book, Coated	.08 @	.15
Coated Lithograph	.10 @	.15
Label	.08 @	.15
News	.05 @	.07
No. 1 Jute Manila	.12 @	.13
Manila Sul., No. 1	.08 @	.10
Manila No. 2	.07½ @	.08
No. 2 Kraft	— @	.10
No. 1 Kraft	— @	.11
Common Bogus	.02½ @	.03
Straw Board	75.00	@85.00
News Board	65.00	@70.00
Chip Board	62.50	@67.00
Wood Pulp Board. (Carload Lots)	1.25 @	1.50
Binder Boards—		
Per ton	75.00	@80.00
Carload lots	75.00	@80.00
Tarred Felts—		
Regular	48.00	@50.00
Slaters	54.00	@56.00
Best Tarred, 1-ply (per roll)	1.35 @	1.50
Best Tarred, 2-ply (per roll)	1.00 @	1.15
Best Tarred, 3-ply	1.50 @	1.65

Bagging

F. o. b. Phila.		
Gunny No. 1—		
Foreign	1.25 @	—
Domestic	1.20 @	1.25
Manila Rope	5.00 @	6.00
Sisal Rope	.75 @	.80
Mixed Rope	.75 @	.80
Scrap Burlaps	1.00 @	1.25
Wool Tares, heavy	2.50 @	2.75
Mixed Strings	.75 @	.80
No. 1, New Lt. Burlap	1.75 @	2.00
New Burlap Cuttings	1.75 @	2.10

Old Papers

F. o. b. Phila.		
Shavings—		
No. 1, Hard White	4.25 @	4.40
No. 2, Hard White	3.50 @	3.75
No. 1 Soft Whit.	3.25 @	3.50
No. 2 Soft White	2.15 @	2.35

(Continued on page 72)

Portland Cement Association

The twenty-first annual meeting of the Portland Cement Association was held at The Biltmore, New York, November 19 to 21 inclusive. As usual, the first day's session was devoted to meetings of standing committees covering such subjects as Accident Prevention and Insurance, Advertising and Publicity, Conservation, Technical Problems, etc., resulting in the preparation of annual reports which were presented at the business session on Wednesday, November 21.

On Tuesday the general session was devoted to a discussion of problems concerning mill practice or things related thereto. At this session papers were presented by Paul C. Van Zandt, Chief Engineer, Asano Portland Cement Company, on "The Manufacture of Portland Cement in Japan" and by T. H. Cosford, Assistant to General Manager, Marquette Cement Manufacturing Company on "Modern Cement Storages and Improvements in Methods of Loading and Packing, and Bag Handling."

The annual election of officers was held with the following results: F. W. Kelley, Albany, N. Y., President; Blaine S. Smith, Chicago, First Vice-President; L. R. Burch, New York, Second Vice-President; John W. Boardman, Detroit, Treasurer.

The Portland Cement Association has been carrying on for the past two years or more an educational advertising campaign, particularly directed toward acquainting the public with a better understanding of some of the problems of cement manufacture.

It was the consensus of opinion, expressed at the meeting, that this campaign has produced most gratifying results and has justified a continuance.

On October 5 the Portland Cement Association delegated H. M. Hadley, a well-known structural engineer of Seattle, Wash., and for many years prominent in connection with construction work on the Pacific Coast to visit Japan, making a study and report on the effect of the earthquake on the many modern buildings erected in Japan within recent years. Mr. Hadley has not had time to make any more than a brief cabled preliminary report, which, however, seems to indicate that modern reinforced concrete structures in the earthquake zone gave a good account of themselves, and that concrete will be used more largely than ever in the great rebuilding plan in Japan which is already under way.

Another interesting item of information in this connection was contained in a letter just received by Charles F. Woodworth, vice-president of the Weber Chimney Company, from U. Tanaka, Japanese representative of the company in Tokyo.

Especially interesting is the report concerning the wireless tower of the Imperial Japanese Government, over which the only messages from Tokyo to the outside world were transmitted for some time after the catastrophe. The tower, built of reinforced concrete, is the highest masonry structure in the world. It stands 660 feet above the ground level and 672 feet above the bottom of the footings.

SEVENTY-FIVE CENT DOLLAR

(*Continued from page* 64)

Finally, any direct means "handed down" by management cannot prove effective until the barrier of mistrust now existing has been torn down and a constructive foundation of common understanding, sympathy and appreciation has been built up in its stead. *For it is a scientific fact that the same causes will produce the same results.*

The remedy nevertheless, as I have stated before, lies in education, but in order that this may be intelligently applied, there must first be a correct understanding by management of the viewpoint of the employee as to the working conditions, wages, supervision, facilities and environment. This analysis can be made without in any way disturbing the policy of administration, but skillful procedure is necessary in order that this viewpoint will be free of bias and prejudice.

Second, such conditions as are found to exist which present cause for real grievance and which are correctable should be removed.

Third, a systematic, well prepared organized campaign of education should be launched, based on careful study, dealing with the advantages of our form of government over that of soviet or socialistic rule—teaching the employee a correct understanding of simple economics so that he may appreciate the many beneficial opportunities afforded him.

Employee Should Understand

The employee should and could be made to understand why the pyramiding of wages without a consistent increase in production is fundamentally unsound and must ultimately react to his own disadvantage, since labor consumes from 80 to 85 per cent of all that is produced.

Your workers can be made to realize that it is the purchase power of the dollar, not the dollar itself, that is the determining factor of their gain. And of equal importance, they could and should be acquainted with the many advantages of "Stick-to-it-iveness" on the job—of the particularly favorable and attractive conditions of the plant in which they are employed, and especially of how it will benefit them most if they will serve their employer best and give him their maximum co-operation. They should be disillusioned from such fancied grievances as they may bear—and their negative thoughts should be supplanted by sound understanding of the rebounding gains to them by observance of fundamentals of good will.

If the workman can be influenced to actions which react to his own loss and disadvantage, then it stands to reason that by square dealing and correct teaching, he can be molded constructively.

By fostering co-operation rather than competition between management and wage earner, a real worth while, work-together spirit can be established with substantial gains to both the employer and the employee.

In closing let me ask, "What is our big job in this old world? Have we not been given the positions that we hold today that we might build and develop it into a better world? He gave to you and me our positions whatever they might be because He felt that in that position we could touch and build the men, greater and mightier even than He because we had larger opportunities.

There is not a man here this afternoon but in whose hands God has placed others. He is expecting you and me to encourage, to lift up, to bring them to a full realization of the responsibilities of life.

Our position in this world whether it is that of building plants, inventing machines or selling goods, is simply a means whereby we can build men. A means whereby we can point them to the silver linings of each dark cloud, create a clear understanding of their opportunities and responsibilities in this life, of the value of liberty and the wonderfulness of this country as it has been established by our forefathers. Men, we cannot shirk this responsibility. Let us reach out and use every means—let us employ to work with us the most skilled that we may successfully build men. And methinks if we will do our best, when life's work shall close, and we turn in our record of life, we will hear the Master of all good workmen say, "Well done, thou good and faithful servant."

G. P. Wigginton Has a Birthday

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., December 12, 1923.—George P. Wigginton, president of the Kalamazoo Loose Leaf Binder Company, celebrated a birthday Thursday of this week. When he entered his office that morning, he found a beautiful bouquet of roses on his desk, with "best wishes" of the employees.

The Home of Quality

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133RD TO 133RD ST & BROOK AVE

PAPER BAGS

Sacks and Specialties

ESTABLISHED 1901

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Manufacturers

500 East 133d Street : New York

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All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856.

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300 Tons daily

Satisfactory deliveries of the *clay* you prefer at prices you will consider reasonable—such is M-E service!

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Dandy Rolls, Cylinder Molds,
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CHENEY BIGELOW WIRE WORKS
Established 1842
SPRINGFIELD MASS.

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21 EAST 40th STREET, NEW YORK CITY

Importers of Chemical Pulps

BLEACHED and UNBLEACHED

Agents for Kellner Partington Paper Pulp Co., Ltd.
Sarpsborg, Norway; Forshaga, and Edsvalla, Sweden.
Kronstädter Papierstoff — Fabrika Action — Gesellschaft
Mills at Tucjansky, Sv. Martin

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, DECEMBER 12, 1923.

With the New Year, "reviving old desires," nearly here, there is a more cheerful feeling throughout the market. A revival of optimism accompanied by a much more substantial revival, namely, demand, has been making itself felt in raw materials and dealers in chemicals are consequently getting ready for increases in business.

Prices have not actually changed as yet, nor are they expected to do so immediately. The increase in demand has been so small to have no effect on the individual commodities, but it seems assured that the present quietness is going to disappear very soon.

Dealers are cheerful over the outlook and believe that the holiday season is going to bring more call for their products.

BLEACHING POWDER.—Trading in bleach was dull despite the willingness of several large manufacturers to sell at extremely low prices in order to beat out their competitors. Just why such a fight was started in a dull market is difficult to explain. It may be that when the campaign was launched it was thought that the market was recovering sufficiently to make things interesting. As the situation stands now it is impossible to quote because of the marked lack of firmness. As the price went slithering downward reputable dealers were taking 1.25 to 1.40 cents, spot 1.25 better.

CAUSTIC SODA.—Caustic also was in poor demand this week in comparison with what was expected of it. This should not be construed as meaning that caustic is in the doldrums, but dealers hope to see an increase very soon. The price is around 3.10 cents a pound on a flat basis at the works. It is thought that the slightly lower price will attract buyers who have been heretofore holding off.

CASEIN.—Casein has not changed much during the past week with the demand about the same and no sign of any upward or downward changes in the price. It is still quoted at from 14 to 18 cents a pound in both the domestic and the foreign grades.

CHINA CLAY.—The same prices continue on china clay with the buying hardly what could be called brisk, but enough to keep things moving along at an even rate. Prices on the domestic grades are from $12 to $15 a ton and on the imported run from $16 to $20.

CHLORINE.—The demand for chlorine has not changed during the week with no further recovery reported. Orders are still for small quantities and it is reported that the dealers have some on hand. Prices continue at 3.25 to 3.50 cents a pound in tank cars.

ROSIN.—Naval stores also remained in a static condition during the past seven days with the price about the same. The paper industry is not calling for so much of the product as it generally does at this time but manufacturers say that there is little hope for any reductions in price. The price is about $5.80 to $6 in 280-pound barrels.

SALTCAKE.—Saltcake is still in fair demand, although there was a slight falling off in the call for it during the past week. The situation is not such as to cause any change in the price, however, which remains at from $22 to $24 a ton. It is said that concessions will be made in this on the open market in some instances.

SODA ASH.—Manufacturers of soda ash say that the demand for this is somewhat better than that for bleach and caustic, although it is not as good as they had hoped it would be. It is still improving slowly and outside the paper industry dealers are having little trouble in disposing of it. The price is 1.38 cents on a flat basis.

SULPHITE OF ALUMINA.—Alumina is not quite as good in demand as it was. Dealers report that they have fairly large stocks on hand, but there is no tendency toward extreme price cutting. The price remains at 2.00 to 2.25 cents for the iron free and 1.20 to 1.30 cents for the commercial grades per pound.

Market Quotations

(Continued from page 69)

No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.25	@	2.50
Writing Paper	2.00	@	2.25
No. 1 Books, heavy	2.00	@	2.25
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.75	@	3.00
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.25	@	1.50
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.90	@	1.00
No. 1 Mixed Paper	1.00	@	1.10
Common Paper	.80	@	.90
Straw Board, Chip	1.00	@	1.10
Binders Bd., Chip	1.00	@	1.10

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12	@	.12¼
New White, No. 2	.07	@	—
Silesias, No. 1	.07¼	@	.07½
New Unbleached	.10	@	.11
Washables	.04½	@	—
Fancy	.05¼	@	.05½
Cottons—according to grades—			
Blue Overall	.05½	@	.05¾
New Blue	.02¼	@	.02¾
New Black Soft	.05¾	@	.06½
New Light Seconds	.02¾	@	.02¾
Khaki Cuttings	.11	@	.04½
Corduroy	.03½	@	.04
New Canvas	.08¼	@	.08¾
New Black Mixed	.04	@	—
Old			
White, No. 1—			
Repacked	.06	@	.06½
Miscellaneous	.04½	@	.04¾
White, No. 2—			
Repacked	.03½	@	.04
Miscellaneous	.03	@	.03¼
Thirds and Blues—			
Repacked	2.30	@	2.75
Miscellaneous	2.15	@	2.35
Black Stockings	2.75	@	3.00
Roofing Stock—			
No. 1	1.35	@	1.40
No. 2	1.25	@	1.30
No. 3	.75	@	.90
No. 4	1.15	@	1.20
No. 5A	1.10	@	—
B			nominal
C			nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.63
Ledgers	.09	@	.35
Writings	.08¾	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.07¼	@	.09¾
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.50	@	5.75
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	$47.50	@	—
News, Vat Lined	50.00	@	—
Wood, Vat Lined	57.50	@	—
Filled News Board		@	52.50
Solid News Board,			
No. 4 Finish	70.00	@	—
S. Manila Chip	65.00	@	70.00
Pat. Coated	85.00	@	95.00

Old Papers

Shavings—			
No. 1 Hard White	3.75	@	4.00
No. 1 Soft White	3.00	@	3.15
No. 1 Mixed	.50	@	.55
Ledgers & Wedding	2.00	@	—
Solid Books	1.60	@	2.00
Blanks	2.00	@	2.25
No. 2 Light Books	1.50	@	—
Folded News, overissues	.90	@	.95
Gunny Bagging	1.10	@	1.12½
Manila Rope	6.75	@	7.00
Mixed paper	.45	@	—
Old News	.85	@	—
Old Kraft	1.90	@	2.10
No. 1 Scrap Burlap	1.00	@	1.10
No. 2 Roofing Bag'g	.75	@	.80
Mixed Strings	1.00	@	1.10
No. 1 Roofing Rags	1.45	@	1.50

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark Tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$42.00	@	44.00
Sulphite easy bleaching	55.00	@	60.00
Sulphite news grade	50.00	@	55.00
Sulphite, bleached	80.00	@	85.00
Sulphate	65.00	@	—

Old Waste Papers

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.65	@	
Soft White Book shavings	3.20	@	
White Blk. News	2.15	@	
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.85	@	—
Light and Crumpled Book Stock	1.70	@	—
Ledgers and Writings	1.85	@	2.25
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut	2.15	@	
Printed Manilas	1.55	@	—
Kraft	2.15	@	
News and Scrap—			
Strictly Overissue	1.00	@	
Folded News	1.00	@	
No. 1 Mixed Papers	.80	@	

Domestic Rags—
Price to mills, f. o. b. Toronto
Per lb.

No. 1 White shirt cuttings	.12	@	.12½
No. 2 White shirt cuttings	.06	@	—
Fancy shirt cuttings	.05½	@	.06
No. 1 Old Whites	.04½	@	—
Third and blues	.02½	@	.02¾
	Per cwt.		
Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06¼	@	.06
No. 2	1.55	@	—
Gunny Bagging	.01¼	@	—